

Part A

Preliminary Information



Greater Taree
CITY COUNCIL

PART A PRELIMINARY INFORMATION

Contents

A1	Introduction	3
A1.1	The name of this plan.....	3
A1.2	Purpose of the Development Control Plan (DCP)	3
A1.3	Where this plan applies	3
A1.4	What is the commencement date of this DCP?.....	4
A1.5	Relationship to other plans and policies	4
A1.6	General aims and objectives.....	4
A1.7	Structure of this development control plan.....	4
A1.8	How to use this development control plan.....	5
A1.9	Can the controls (performance criteria of the DCP) be varied?.....	5
A1.10	Where can I get more information?	5
A2	Submitting a development application.....	6
A2.1	Do I need to submit a DA?	6
A2.2	Preparing a development application	6
A2.3	Lodging a development application	7
A3	Notification and public participation	8
A3.1	Introduction	8
A3.2	Development applications	9
A3.2.1	What public notice may be used?.....	9
A3.2.2	How long will the notification and exhibition period be?.....	9
A3.2.3	Procedures for development that requires notification or advertising	10
A3.2.4	What development does not have to be notified?.....	10
A3.2.5	Amendment of development applications & modification of development consents.....	11
A3.2.6	Integrated development	12
A3.2.7	What development gets advertised	13
A3.2.8	Designated development	13
A3.3	Submissions.....	15
A3.3.1	Inspection of application & accompanying information.....	15
A3.3.2	Making of submissions	15
A3.3.3	Can I look at the plans of the proposed development or building?	15
A3.3.4	Acknowledgement of submissions.....	15
A3.3.5	Submission period	15
A3.3.6	Late submissions	16
A3.3.7	Anonymous submissions.....	16
A3.3.8	Public access to submissions	16
A3.3.9	Consideration of submissions	16
A3.3.10	Notification of a Council meeting	16
A3.3.11	Referral to submissions in reporting	16
A3.3.12	Notice of determinations.....	16
A3.4	Public notification procedures	17
A3.4.1	Fees and charges.....	17
A3.4.2	Site notices.....	17
A3.4.3	Notification over public holidays	17
A3.4.4	Additional notification plans with development applications	17

A1 Introduction

About this part:

This part provides the detailed statutory and preliminary information related to the operation of this development control plan, what is required in submitting a development application and Council's advertising and notification requirements.

Applies to:

All land in the Greater Taree Local Government Area

Date adopted by Council:

14 October 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

Nil

A1.1 The name of this plan

This plan is the Greater Taree Development Control Plan 2010.

A1.2 Purpose of the Development Control Plan (DCP)

This Development Control Plan (DCP) has been prepared in accordance with section 74(C) of the Environmental Planning and Assessment Act, 1979 (the Act) and with the Environmental Planning and Assessment Regulation 2000.

The purpose of this DCP is to:

- Expand upon the aims, objectives and other provisions of the Greater Taree LEP 2010;
- Provide detailed planning and design objectives and performance criteria to guide the built form, environmental and social amenity standards and requirements for development within Greater Taree City Council;
- Provide area specific development controls within local area plans.

Under section 79(C) of the Act, the consent authority is required to take into consideration the relevant provisions of this DCP in determining an application for development in Greater Taree.

A1.3 Where this plan applies

This plan applies to all land within the Greater Taree Local Government Area.

A1.4 What is the commencement date of this DCP?

This Greater Taree Development Control Plan 2010 was adopted by Council on 14 October 2009 and came into force upon the gazettal of the Greater Taree Local Environmental Plan 2010.

A1.5 Relationship to other plans and policies

The provisions contained in this DCP are in addition to the provisions of the Greater Taree LEP 2010. This DCP should be read in conjunction with the Greater Taree LEP 2010. If there is any inconsistency between this DCP and the Greater Taree LEP 2010, the LEP will prevail.

A1.6 General aims and objectives

The key aims of this plan are to:

- o Achieve a high architectural standard of development that is sympathetic with the environment;
- o Achieve a high level of environmental and social performance for all development;
- o To provide a framework of considerations against which development proposals can be consistently measured.

The objectives of this plan are to:

- o Ensure development responds to the features and qualities of the subject site;
- o Ensure development responds to the character and qualities of the surrounding neighbourhood;
- o Maximize the environmental performance of the development;
- o Minimize the negative impacts on the amenity of the adjoining properties;
- o Encourage quality, innovative and sustainable design.

A1.7 Structure of this development control plan

This DCP is divided into a number of parts, as follows:

Part A	Preliminary Information
Part B	Character Statements
Part C	Subdivision Requirements
Part D	Environmental Requirements
Part E	Flooding Requirements
Part F	Heritage Requirements
Part G	Car Parking and Access
Part H	Residential Requirements
Part I	Commercial Requirements
Part J	Rural and Environmental Zone Requirements
Part K	Industrial Requirements
Part L	Local Area Plans
Part M	Site Waste Minimisation and Management
Part N	Landscaping Requirements
Appendices	

A1.8 How to use this development control plan

When undertaking development you are to follow the requirements of Parts A to E, G, M and N which apply to all developments.

Specific development provisions in Parts F, H, I, J, K and L relate to the type of development being undertaken or the location.

If your development is within a heritage conservation area or proposes any changes to a heritage item, you will also need to follow the requirements of Part F.

A1.9 Can the controls (performance criteria of the DCP) be varied?

Each section provides an explanation of the criteria and a range of objectives and performance criteria to meet these objectives. All development must meet the objectives. Where a variation is sought from the specific performance criteria or requirement of this DCP, the development application must:

- Include strong justification for each variation;
- Demonstrate how the objective of the provision is achieved.

Each application will be considered on its merits. The application may be refused despite compliance with set standards.

A1.10 Where can I get more information?

For further information about this DCP contact:

Council's Customer Service Department on (02) 6592 5399 during normal business hours.

Visit Council's website at www.gtcc.nsw.gov.au, or

Email gtaree@gtcc.nsw.gov.au

A2 Submitting a development application

This section sets out the requirements for determining if a Development Application (DA) is required and how to lodge a DA.

In addition, applicants are advised to refer to the State Government **State Environmental Planning Policy Exempt and Complying Development Codes 2008 (CODE SEPP)**, which makes provision for a wide range of development as either exempt or complying development. Further information is available on www.legislation.nsw.gov.au

A2.1 Do I need to submit a DA?

Applicants are advised to refer to the State Government State Environmental Planning Policy Exempt and Complying Development Codes 2008 (CODE SEPP), which makes provision for a wide range of development as either exempt or complying development.

Applicants are advised to ensure that the proposed development is a permitted use within the zone applying to the site under the current Greater Taree Local Environmental Plan.

Exempt

Some minor development, known as Exempt Development is permitted to be undertaken without the need for a Development Application. Applicants are to refer to the Exempt Development schedule within the current Greater Taree Local Environmental Plan for the types, limits and requirements of exempt development.

Complying

A range of frequently occurring minor development may be undertaken as Complying Development. Applicants are to refer to the Complying Development schedule within the current Greater Taree Local Environmental Plan for the range of development and the associated limits and requirements of complying development. These applications are lodged under a Complying Development application.

Planning Proposal

Development requiring the rezoning of land for uses not currently permitted within the zone applying to the site under the current Greater Taree Local Environmental Plan requires a planning proposal application. Applicants are strongly advised to discuss these proposals with Council staff prior to undertaking any studies or lodging an application.

Future expansion of urban development areas will be guided by the objectives and directions of the Mid North Coast Regional Strategy (as prepared by the State Government) for urban expansion. Applicants are advised to review and understand the context and strategic requirements of this strategy.

A2.2 Preparing a development application

Applicants are strongly advised to use the services of a fully qualified Town Planning professional, Architect, Building Designer, Landscape Architect and/or Engineer as they may be required to address a range of issues relevant to the particular development proposal.

In addition, applicants are also advised to seek the advice of Council's Regulatory Services staff in the initial phase of concept design

development of the development application. By doing so, applicants may avoid omitting important information and thereby ensure that Council has sufficient information to allow it to process the application.

A2.3 Lodging a development application

Council requires the submission of the following information as a **minimum**. It should be noted that in various circumstances, Council may require additional information to that stated to assess an application. The Environmental Planning and Assessment Act confers the right of Council to request additional information after lodgement of the Development Application if the Council determines that such information is necessary for the proper assessment of the proposal.

The minimum requirements include:

- Completed Application Form
- Application Fees
- Owners Consent
- Development Plans
- Statement of Environmental Effects and supporting information
- A4 sized version of plans for neighbour notification purposes
- BASIX Certificate
- Other Plans/Documents/Reports (as required).

Refer to Council's website for the full list of requirements.

Applicants are advised to seek the advice of Council's Regulatory Services staff in order to determine the extent of information required to accompany their Development Application.

Applicants may lodge their plans in person at Council's Administration Centre at 2 Pulteney Street, Taree.

Development consent is obtained by lodging a Development Application for approval in accordance with the provisions of the Environmental Planning & Assessment Act 1979. Appropriately detailed plans must be submitted in conjunction with completed Development Application forms. These forms are available at Council's Customer Service counter.

A3 Notification and public participation

A3.1 Introduction

This section sets out the requirements and procedures for the public advertising and notifying of development applications for local development.

Publicity given to local development proposals either through notifying or press advertising is intended to allow the community the opportunity to inspect development proposals and make informed submissions on these plans.

Objectives

- Outline the procedures undertaken by Council for the public notification of development applications.
- Ensure notification is carried out in accordance with the Environmental Planning and Assessment Act, the Environmental Planning and Assessment Regulations and applicable Environmental Planning Instruments.
- Provide a mechanism to ensure that when people or their properties are considered potentially affected by development applications, they are advised of that application for development.
- Provide an opportunity for people when their property is considered potentially affected by development proposals to have their written submissions considered when a development application is being determined by Council.
- Ensure consistency and fairness in the manner in which Council deals with development applications.
- Detail the form that notification will take and the requirements for notification.

Applicants and designers are encouraged to voluntarily consult with the adjoining landowners prior to lodging an application. Such consultation enables the applicant to understand the concerns of affected parties and for these concerns to be taken into account early in the design process and may minimize delays in the processing of an application.

This section identifies Council's commitment to meet certain standards for public notification. Council may however, decide to extend any notification standards beyond the requirements as outlined, if warranted by a particular development proposal or plan.

In forming an opinion to notify adjoining owners, Council will consider potential impacts on the use and amenity of their land, including such matters as:

- Impact on views,
- Access to sunlight, privacy,
- Impact of noise, odour, light,
- Visual impact, streetscape and local character,
- Traffic and access.

A3.2 Development applications

A3.2.1 What public notice may be used?

Public notification may include:

- Direct written notification – a letter to specified persons likely to be affected by a development proposal, or where relevant a Council plan;
- Published notice in the local newspaper;
- Exhibition notice – details of a development proposal or plan are placed on public exhibition for a specified period of time, to be available for inspection in person by any members of the public;
- Site notice erected on the site of a proposed development where required by the EP&A Act;
- Web page information published in the Council website www.gtcc.nsw.gov.au;

In addition, if the development proposal or the draft plan is likely to generate broad community interest, the Council may also:

- Notify or advise beyond the requirements;
- Consult with relevant interest groups;
- Arrange public meetings, presentations, open days or other public forums; and/or
- Send media releases to the media agencies.

A3.2.2 How long will the notification and exhibition period be?

Notification is where Council writes to those people identified as requiring notification, advising of the submission of a development application. Notification is for a minimum period of 14 days.

Advertising is where Council, in addition to writing to those people required to be notified, places an advertisement in a local newspaper advising of the submission of a development application. Advertising is for a minimum period of **14 days** unless otherwise specified by legislation or Environmental Planning Instruments in the case of Integrated, Designated and Advertised Developments.

Note: The notification period for advertised applications starts on the day after the advertisement is placed in the local newspaper.

The notification period of any notified or advertised application may be extended if, in the opinion of Council, it would be in the public interest to do so.

A fee is payable at the time of lodgement of a development application for both notification and advertising. The fee charged is in accordance with Council's adopted Fees and Charges at the time of lodgement.

A3.2.3 Procedures for development that requires notification or advertising

The requirements for notification of development applications are:

1. A written notice from Council to the adjoining landowner/s in all areas, (and occupiers within an urban area), containing the following information:
 - a description of the land (including the address) on which the development is proposed to be carried out;
 - the name of the applicant;
 - a description of the proposed development;
 - a statement that the application and the documents accompanying that application may be inspected at the Council's principal office during the Council's ordinary office hours during the exhibition period; and
 - a statement that any person may make a written submission in relation to the development application to the Council within the exhibition period.
2. Any written notice given may also be accompanied by a copy of the plans of the proposed development (excluding floor plans).

A3.2.4 What development does not have to be notified?

Notification and advertising will not be required for development applications involving:

1. New works in any zone involving alterations to an existing approved building which will not result in changes to the height, elevations or façade of the existing building;
2. Development, which in the opinion of Council will not detrimentally affect the amenity of persons on adjoining and neighbouring land; or
3. Include the following development types:
 - Rural agricultural land use activities (except intensive livestock agriculture) permissible within RU1, RU2, RU3 and RU4 zones;
 - Single dwellings and ancillary structures within RU1, RU2, RU3 and RU4 zones;
 - Buildings ancillary to agriculture which are not complying development within RU1, RU2, RU3 and RU4 zones;
 - Advertising signs (except illuminated signs);
 - Demolition of buildings (except heritage items);
 - Industrial development within the IN1 and IN2 zones (except where the site adjoins R1, R2, R3, R4, R5, or RU5 zoned land);
 - Change of use in B1, B2, B3, B5, B6 or B7 zones from a shop to a shop, an office to an office, a shop to office or an office to shop;
 - Single storey additions;
 - Re-cladding of roofs and walls of existing approved buildings, but only where non-reflective materials are used; and
 - Boundary adjustments.

A3.2.5 Amendment of development applications & modification of development consents

Prior to the Issue of Development Consent

An applicant may amend a development application at any time prior to the final determination of the application. Council may use its discretion in deciding to dispense with advertising and notification requirements where:

- a development application is amended, substituted or withdrawn and later replaced before it has been determined by Council; and
- the Council has complied with the requirements of this Part in relation to the original application; and
- Council is of the opinion that the amended, substituted or later application differs only in minor respects from the original application.

Otherwise the development application will be re-advertised and/or re-notified in accordance with the provisions of this Part.

After the Issue of Development Consent

Minor Modifications (Section 96(1))

Council may, on application, modify a development consent to correct a minor error, misdescription or miscalculation.

There are no advertising or notification requirements for minor modifications.

Modifications involving minimal environmental impact (Section 96(1A))

Council may, on application, modify a development consent where modifications involve minimal environmental impact, if:

1. It is satisfied that the proposed modification is of minimal environmental impact; and
2. It is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all); and
3. It has notified the application in accordance with:
 - a. the regulations, if the regulations so require, or
 - b. a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent; and
4. It has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.

Modifications, which in the opinion of Council will not detrimentally affect the amenity of persons on adjoining or neighbouring land, do not have to be notified.

Applicants should be aware that there are special requirements for any consent issued for land containing threatened species issues.

Other Modifications (Section 96(2))

Council may, on application, modify a development consent if:

1. It is satisfied that the development to which the consent as modified relates is substantially the same development; and
2. It has consulted with the relevant Minister, public authority or approval body in respect of a condition imposed as a requirement of a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted and there has not within 21 days after consultation, been any objection to the modification; and
3. It has notified the application in accordance with the regulations; and
4. It has considered any submissions made concerning the proposed modification within the prescribed period.

All development applications for other modifications will be notified in the same manner as the original development application.

Applicants should be aware that there are special requirements for any consent involving requirements for threatened species.

Section 82A Reviews

All applications made under Section 82A of the Environmental Planning and Assessment Act, 1979 for a review of determination of development applications will be notified for a period not exceeding 14 days, in the same manner as the original development application, including notification to any objectors.

A3.2.6 Integrated development

If the development is **Integrated Development** (as defined by Section 91 of the Environmental Planning & Assessment Act 1979), the written notice must:

- contain a statement that the development is integrated development, and
- state the approvals that are required and the relevant approval bodies for those approvals, and
- in the case of development that impacts on threatened species, contain a statement to that effect.

If the development is **Nominated Integrated Development** (for the purposes of Clause 5(1) (b) of the Environmental Planning & Assessment Regulation 2000 1979), the periods referred to above are to be increased to **30 days**. Nominated Integrated Development is development that requires an approval from an external authority under the following legislation:

- the Heritage Act
- the Protection of the Environment Operations Act, and
- the Water Management Act.

A3.2.7 What development gets advertised

Where development is for any of the following purposes, written notice complying with the above shall also be published within a locally circulating newspaper in addition to any written notice from Council to the adjoining landowner/s in all areas, and occupiers where within an urban area:

- major community or public facilities whether publicly or privately owned (including hospitals, libraries, schools, universities, sports and entertainment facilities);
- public buildings in Residential and RU5 zones;
- major development on Council owned or controlled land;
- major shopping and retail centres;
- major transport infrastructure, interchanges and transport depots;
- hotels, taverns, licensed clubs and places of public entertainment;
- caravan parks, mobile home parks and manufactured home estates;
- places of assembly and reception centres;
- churches or similar places of worship;
- motels;
- neighbourhood centres;
- the demolition of a heritage item;
- the demolition of a building or work within a heritage conservation area;
- the use of a building or land which is a heritage item;
- buildings exceeding 14 metres in height measured from natural ground level to the uppermost point of the building;
- non-designated development extractive industries (State Environmental Planning Policy No. 37 – Extractive Industry);
- any development application accompanied by a Species Impact Statement; and
- commercial water based activities.

A3.2.8 Designated development

Designated Development is certain types of significant development e.g. concrete batching plants, large breweries/distilleries; listed in Schedule 3 of the Environmental Planning and Assessment Regulations.

All Designated Developments must be advertised for a minimum period of 30 days and in accordance with the special advertisement procedures listed in the Environmental Planning and Assessment Regulations.

Other Advertised Development

Legislation or Environmental Planning Instruments may make certain types of development advertised, e.g. remediation of contaminated land which is 30 days advertising as per SEPP 65.

All other Advertised Developments must be advertised for a minimum period of 14 days unless otherwise specified by legislation or an Environmental Planning Instrument.

Notification requirements for amended approvals

An applicant may lodge an application to amend an approval, pursuant to Section 96 of the Environmental Planning and Assessment Act, if the approval as amended will be substantially the same as the original approval.

Council will not notify amendments lodged under section 96(1) or 96(1A) that involve:

- minor error, misdescription or miscalculation.
- minimal environmental impacts.

Council will notify all amendments lodged under Section 96(2) of the Environmental Planning and Assessment Act.

Council will advertise all amendments lodged under Section 96(2) of the Environmental Planning and Assessment Act where the amendments are to an approved Designated Development listed in Schedule 3 of the Environmental Planning and Assessment Regulations.

Note: Notwithstanding the above, all amendments may be notified or advertised if, in the opinion of Council, it would be in the public interest to do so.

Submissions made on the original application will be included in Council's assessment of the amended application.

Council reserves the right to notify any development, which it considers is of a form, scale or type, which may generate neighbour or community interest or potential impacts.

A3.3 Submissions

A3.3.1 Inspection of application & accompanying information

During the submission/exhibition period, any person may inspect the development application or draft plan and any accompanying information. Copies or extracts may be taken only as authorised by relevant legislation. A photocopy fee will be charged in accordance with Council's Schedule of Fees and Charges.

Extracts of an application can be requested (height and external configuration – no internal floor plans) in accordance with Section 12 of the Local Government Act 2003.

A3.3.2 Making of submissions

During the submission period, any person may make written submissions to Council with respect to the development application or draft plan.

When making a submission to Council in response to a development proposal or plan, the submission should:

- Be in writing and addressed to the General Manager;
- Clearly indicate the name and address of the person making the submission and a daytime contact number;
- Clearly indicate the application number and address of the development application or draft plan;
- Detail any objections or support and give reasons for the objection(s) or support;
- And may be delivered by hand, mailed, emailed or faxed to:

The General Manager
Greater Taree City Council
2 Pulteney Street
Taree NSW 2430
Fax: 6592 5311
Email gtaree@gtcc.nsw.gov.au

A3.3.3 Can I look at the plans of the proposed development or building?

External configurations may be viewed at the Customer Service counter, during Council's business hours.

A3.3.4 Acknowledgement of submissions

Council will formally acknowledge submissions on any development proposal or plan.

A3.3.5 Submission period

The closing date for submissions is the same as the exhibited period in the case of development proposals. For draft plans, the closing date may be later and will be specified in letters and advertisements.

A3.3.6 Late submissions

Acceptance of late submissions will be considered in extenuating circumstances, and at the discretion of the Council officer assessing the proposal until the determination of the proposal.

A3.3.7 Anonymous submissions

Anonymous submissions will not be accepted. Persons making submissions may, however, request that their name and contact details not be released by Council, but only to the extent permitted by the Government Information (Public Access) Act 2009.

A3.3.8 Public access to submissions

Submissions are not confidential documents. Any interested person may view or obtain copies of submissions, and Council provides no assurance that the name and contact details of the persons making submissions will not be obtained by applicants or other interested parties in the event of any application made for the release of information under the Government Information (Public Access) Act 2009.

*Note:
Further
information
on **Council
meetings** can
be obtained
from Council's
website:
www.gtcc.nsw.gov.au*

Apart from Council staff assessing the applications, members of the public, including the applicant, property owner and other persons lodging submissions may inspect submissions (excluding author's name and address):

- At the Customer Service counter during Council business hours.
- If referred to the Council meeting, following a Council resolution on the agenda or business paper item for such meeting.
- If the application is determined by Council staff, once the determination has been made (i.e. consent or refusal issued).

A3.3.9 Consideration of submissions

Council must consider all submissions received in the submission period before determining a development proposal or plan and Council must also consider all issues raised in the submissions in assessing the proposal.

A3.3.10 Notification of a Council meeting

If an application or Council plan is placed on the Council meeting agenda, the applicant and any person who made a written submission (other than petitions) will be notified of the time and date of the Council meeting. Persons may request to speak for or against each agenda item.

A3.3.11 Referral to submissions in reporting

Names and addresses of people making submissions are not generally referred to directly in reporting; however, persons making submissions are advised that this information is public information.

A3.3.12 Notice of determinations

Council will send a letter notifying of the determination of an application, as soon as possible following the determination, to each person that made a submission.

A3.4 Public notification procedures

A3.4.1 Fees and charges

Council's Management Plan identifies fees and charges for each of the categories of advertising/notification identified in this report.

Also, Council will charge its normal copying fees for plan details sent with neighbour notification letters if these do not accompany applications submitted for local development or other modification of development consents lodged with Council after commencement of this plan.

A3.4.2 Site notices

Where required by the Environmental Planning and Assessment Act or Regulation, a notice will be placed on the site for certain proposed developments. In general terms, such developments are designated developments.

A3.4.3 Notification over public holidays

It is noted that for applications lodged in December the exhibition period will be extended to ensure that members of the public are given adequate notice of applications over the extended public holiday period.

A3.4.4 Additional notification plans with development applications

To assist the neighbour notification process under this part, Council may specify the number of copies of plans and supporting documentation to be lodged with development applications. This may include a mixture of A4 and A3 size copies of plans as specified by Council in the particular instance.

Summary of what notification applies to selected development?

Type of application or plan	Letter to adjoining owners in all areas and occupiers in urban areas	Advertising in local paper	Advertised on Council's website	Notice on the site	Notification period
Development Applications					
Development Applications (generally)	Yes				14 days
Notified Development Applications (as in part A3.2.2)	Yes	Yes		No	14 days
Designated Development Applications	Yes	Yes		Yes	30 days
Integrated Development Applications	Yes	Yes			30 days
Review of determinations	As per the original application				
Council prepared plans or policies					
Local Environmental Plans	Yes	Yes	Yes		28 days
Development Control Plans	Yes	Yes	Yes		28 days
Modifications to a consent					
Type 96(1) minor modification	No	No	No	No	N/A
Type 96(1A) modification involving minimal environmental impact	Only where determined necessary by Council	No	No	No	N/A
Type 96(2) other modifications	Only where previously notified and as per the original DA	Only where previously advertised and as per the original DA	Only where previously advertised and as per the original DA	Only where previously notified and as per the original DA	Time period as notified previously

Part B

Character Statements



Greater Taree
CITY COUNCIL

PART B CHARACTER STATEMENTS

Contents

B1	General.....	3
B1.1	Major Regional Centre	4
B1.1.1	Taree	4
B1.2	Towns	5
B1.2.1	Wingham Town Centre	5
B1.2.2	Old Bar	12
B1.3	Coastal Villages	13
B1.3.1	Wallabi Point.....	13
B1.3.2	Harrington	13
B1.3.3	Crowdy Head	13
B1.3.4	Manning Point	13
B1.3.5	Hallidays Point	13
B1.3.6	Redhead.....	13
B1.3.7	Blackhead.....	13
B1.3.8	Diamond Beach	13
B1.4	Inland Villages.....	14
B1.4.1	Tinonee.....	14
B1.4.2	Nabiac	14
B1.4.3	Lansdowne	14
B1.4.4	Coopernook	15
B1.5	Small Villages.....	21
B1.5.1	Rainbow Flat.....	21
B1.5.2	Krambach.....	21
B1.5.3	Elands.....	21
B1.5.4	Johns River.....	22
B1.5.5	Upper Lansdowne	28
B1.5.6	Hannam Vale	28
B1.5.7	Moorland	29
B1.5.8	Bobin	35
B1.5.9	Croki.....	35
B1.5.10	Killabakh	35
B1.5.11	Wherrol Flat.....	35
B1.5.12	Marlee.....	35
B1.5.13	Mount George	35
B1.5.14	Burrell Creek.....	35
B1.5.15	Dyers Crossing.....	35
B1.6	Rural residential lands	36
B1.7	Rural lands	36

B1 General

About this part:

This part identifies character statements for localities and areas within the Greater Taree Local Government Area.

Applies to:

Each Character Statement applies to the land as mapped.

Date adopted by Council:

14 October 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

Explanation

A Character Statement provides a schematic snapshot of a locality. It identifies the qualities and values of the locality, the nature of the built form, the environmental qualities, role in the hierarchy of localities and access to services. A character statement identifies what is unique to an area, what is valued and to be retained and provides opportunities for change to occur and in what form.

The Mid North Coast Regional Strategy provides the framework and hierarchy for regional towns and villages. This strategy should be read in conjunction with this DCP.

Objectives

- Character statements provide a context for a locality to guide future development within that locality.

Submission requirements

Applications are to consider and address the requirements of the Character Statement for your locality in any Development Application.

Note:
If your property contains a **heritage item or you are within a heritage conservation area**, additional guidelines may apply and this section is to be read in conjunction with Part F

B1.1 Major Regional Centre

B1.1.1 Taree

This part is intentionally blank. The character statement for Taree is yet to be drafted.

B1.2 Towns

B1.2.1 Wingham Town Centre

About this part:

This part identifies the character statement for the Wingham Town Centre locality.

Applies to:

The Character Statement applies to the land as mapped in Map 1.

Date adopted by Council:

16 May 2012

Effective date:

25 May 2012

Related Policy / Technical Manual:

Introduction

This Character Statement applies to the town centre at Wingham, as shown within the heavy dark line on Map 1.

Role of the Location

Wingham is widely recognised as a heritage town and provides a destination for tourists interested in heritage. It also attracts residents looking to live in a traditional country town that is not spoilt by modern developments. Wingham is also a gateway to the regions' western villages and rural localities.

Existing Character

The Wingham town centre is characterised by:

- A traditional shopping precinct (along Isabella and Bent Street). The older buildings are good examples of traditional commercial buildings with central entrances, large glass shopfronts and awnings over the footpath. These older buildings are generally constructed out of brick, often painted or rendered.
- A public building precinct (fronting Farquhar and Wynter Street) where many of the community's local services are located. The uses include the library, post office, police station, schools and churches. Many of the buildings are recognised as heritage items.
- A town green being Central Park which is an assembly place for the community. A range of activities take place in this park from markets, festivals and fairs, to recreational activities both passive (walking, informal sports use) and active (weekend cricket matches). The land also serves a historical and commemorative function.
- A Conservation Area in the Greater Taree Local Environmental Plan 2010, which recognises the grouping of the many historical buildings of Wingham.

Constraints

There is limited ability to expand commercial development in the future without impacting upon adjoining housing stock which itself is integral to the heritage character of the township.

The gateway to the town centre when approaching from Taree is not clearly defined and could be re-inforced through future developments.

Opportunities

Wingham's recognition as a heritage town will continue to be an attractor to visitors. The Manning Valley Historical Museum located in the town centre plays an important role in people understanding the heritage of the town and area.

The town centre is being revitalised with boutique accommodation, eateries and cooking schools, as well as becoming a hub for unique and antique shopping. These types of business activities will be built upon to further define the commercial character of the township.

Wingham is also the gateway to the mountains, a starting point for undertaking tourist drives up to the mountain forests, villages and tourist attractions.

Desired Future Character

Wingham town centre will continue to maintain its heritage and country town feel and remain a central meeting place for the community. This can be achieved by careful planning and preserving existing commercial buildings where possible and practical.

The traditional shopping precinct will continue its zero setback of buildings (front and side) with on-street or centralised parking being provided, rather than parking for each individual business. There will be a continuation of the theme of awnings over the footpaths supported by posts closer to the road pavement consistent with the style and colours of the heritage buildings in the town centre.

Gateways into this traditional shopping precinct will have buildings designed to ensure people entering the town centre either by car or walking are aware that they have entered the commercial hub for Wingham. The design will complement the traditional shop fronts and open up views to Central Park.

The public building precinct will continue to provide services to the local community. Any new buildings will need to respect the heritage buildings in this precinct.

Central Park will continue to be the focus for community events and recreation.

Performance Criteria

Traditional Shopping Precinct

New or replacement buildings will maintain the predominant zero setback to the main street frontage and side boundaries.

Onsite parking and service areas are not to be visible from the main street frontage.

Where shown as Street Awnings on Map 1, buildings will provide for the continuation of the theme of awnings over the footpaths. The form and design of street awnings should:

- unify the streetscape rather than being a response to the individual host building,
- extend across the entire building frontage,
- be compatible with the host building and surrounding streetscape, having regard to architectural style, form, finish, heritage significance and provision of continuous weather protection,
- employ uncomplicated, regular forms with simple detailing and concealed conduits, where possible, to reduce visual clutter,
- include design articulation to modulate long awnings, identify entrances and provide architectural expression,
- be of a suspended design, but a post-supported design may be used where necessary to achieve compatibility with an existing building or an existing post-supported street awnings in the immediate vicinity, or to conserve, restore, reconstruct or reinstate an existing or former awning having heritage significance (heritage report required),
- ensure street awnings and balconies are structurally capable of withstanding all likely loads, including self loads, live loads, impact loads, lateral wind loads and loads experienced during storms. Post-supported street awnings and balconies shall be capable of retaining structural integrity in the event of removal of any one post or, in the case of locations with high traffic hazard (such as corner lots), in the event of simultaneous removal of all or multiple posts,
- ensure the outer edge of the fascia is continuous with adjacent street awnings, is parallel to the kerb and incorporates cut-out segments to accommodate trees, where appropriate.

The dimensions of the awnings should provide:

- the fascia set back at least 200mm from the kerb and posts set back at least 600mm from the kerb,
- posts located so that they meet the requirements of relevant public utility agencies,
- the lowest part of the fascia at least 2700mm above the footpath,
- the underside and fascia to be generally continuous with adjoining street awnings and/or balconies,
- on sloping sites, street awnings that step down in horizontal steps to follow the slope of the street. Steps for design articulation shall be a maximum of 700mm,
- roof and ceiling pitch for awnings to be generally horizontal, up to 6 degrees maximum,

- additional kerb clearances for awnings or balconies located on road corners where taller vehicles (such as heavy vehicles) may bank when turning, particularly where there is a significant cross fall on the road.

Lighting shall:

- be provided below street awnings and balconies to supplement existing street lighting and spill lighting from shopfronts,
- be recessed into the awning under-surface, and all associated wiring and conduits shall be concealed,
- be readily accessible to facilitate regular maintenance,
- not be flashing.

Drainage of street awnings shall be designed to ensure that it does not interfere with pedestrian or vehicle traffic, nor create unsightliness. The awning roof shall drain towards the building so as to avoid gutters and downpipes at the kerb line.

A maintenance plan is to be developed and include:

- annual inspection of structural components,
- repainting every five years,
- regular maintenance to guttering and downpipes,
- regular cleaning and replacement of defective lighting, advertising or other deteriorated components of the awning; and
- regular cleaning of awning glazing, where installed.

New buildings should be designed and constructed to reflect the existing traditional shopping character. While modern building techniques and materials can be used, the style and finish (look and feel) of the buildings are to be consistent with adjoining or nearby buildings.

New or infill buildings are to ensure:

- adjoining buildings (particularly heritage buildings) are considered in the design of new buildings in terms of:
 - appropriate alignment to the street,
 - building heights when viewed from the main street,
 - setbacks of the building above the awning,
 - appropriate materials and finishes selection,
 - facade proportions including horizontal or vertical emphasis.
- horizontal elements of new buildings at the street edge, such as string courses, cornices, parapets, window sills and heads are to relate to those of existing buildings, particularly heritage buildings,
- new development in existing well defined streets (ie. Isabella and Bent Streets) is to complement existing buildings in the vicinity by incorporating large shopfront windows and central access. The selection of external materials and colours should be warm earthy colours, rather than primary colours or stark white,
- external walls should be constructed of high quality and durable materials and finishes with self-cleaning attributes, such as face brickwork, rendered brickwork, stone, concrete and glass. To assist articulation and visual interest, unrelievable expanses of any single material are to be avoided. Highly reflective finishes

and curtain wall glazing are not permitted above ground floor level,

- visible parts of side and rear boundary walls are to be treated with similar consideration to proportion, detailing and materials as to other elements of the façade,
- roof top structures such as air conditioners and solar panels are to be incorporated into the roof design and not visible from the main street frontage.

Advertising signs are to be typically located:

- on the front wall under the street awning, including on the windows,
- on the front wall above the street awning,
- along the fascia board on the outer edge of the street awning over the footpath, and/or
- as a hanging sign under the street awning.

Advertising is not to be illuminated or project above the building. Advertising needs to reflect the historical character of the town centre and form part of the building rather than being an add-on to the building. This can be achieved by signage:

- being painted onto the building,
- using individual letters attached to the buildings,
- being mounted on a suitable stiff substrate that does not warp or buckle when fixed to the building fabric. Signage must be mounted in a manner that respects the existing building fabric and articulated details. An edge detail or frame that integrates the signage with the building facade or awning fascia is required (exposed untreated edges are not acceptable),
- being framed to enhance the appearance; or
- using heritage colour schemes.

Public building precinct

Given the heritage significance of this precinct, any new buildings are to reflect the built form in terms of design, materials and colour. Being traditional public buildings servicing the local community, the built form will need to be detailed and have high quality finishes, clearly showing the prominence of the building in the streetscape.

Central Park

Ensure the open nature of the park is retained to enable the mix of recreational and community based activities that occur in the park.

Gateway sites

Buildings on corner sites are to address each road frontage with architectural emphasis and use of distinguishing architectural features and materials.

Street corners are to be emphasised with stronger design elements, such as increased wall height, positioning of entrance door way, use of parapet feature, etc.

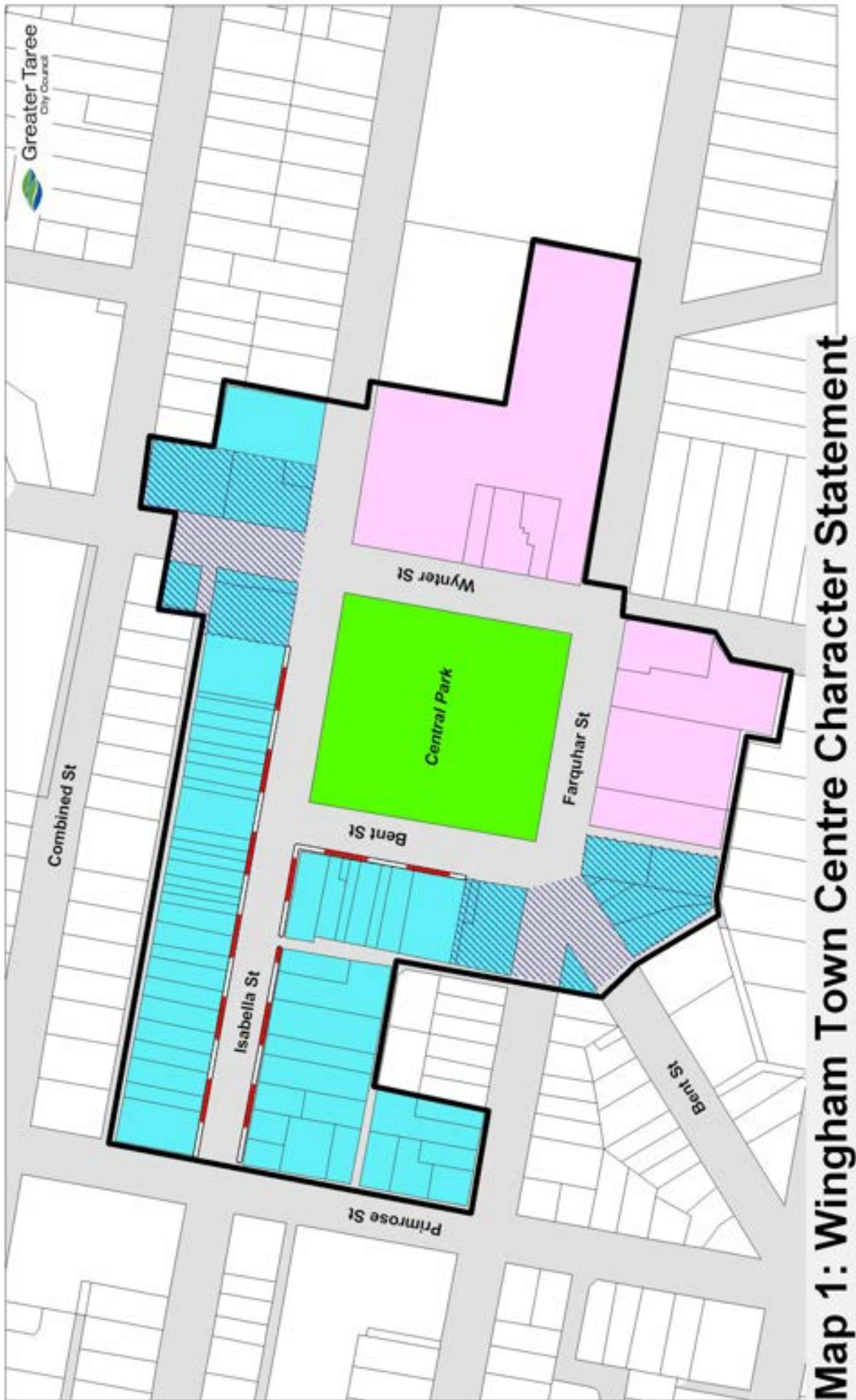
New development is to demonstrate how the development proposal addresses the gateway location and how the building has been designed to function as a gateway structure.

Road reserves

Any works within the road reserve (includes the footpath), other than awnings, will be consistent with:

- the approved Wingham CBD Urban Design Plan
- Council's civil design and construction standards.

Note: Any works within the road reserve need to be approved under Section 138 of the Roads Act 1993.



Map 1: Wingham Town Centre Character Statement

- Town Centre
- Traditional Shopping Precinct
- Public Building Precinct
- Central Park
- Gateway Sites
- Street Awnings



B1.2.2 Old Bar

This part is intentionally blank. The character statement for Old Bar is yet to be drafted.

B1.3 Coastal Villages

B1.3.1 Wallabi Point

This part is intentionally blank. The character statement for Wallabi Point is yet to be drafted.

B1.3.2 Harrington

This part is intentionally blank. The character statement for Harrington is yet to be drafted.

B1.3.3 Crowdy Head

This part is intentionally blank. The character statement for Crowdy Head is yet to be drafted.

B1.3.4 Manning Point

This part is intentionally blank. The character statement for Manning Point is yet to be drafted.

B1.3.5 Hallidays Point

This part is intentionally blank. The character statement for Hallidays Point is yet to be drafted.

B1.3.6 Redhead

This part is intentionally blank. The character statement for Redhead is yet to be drafted.

B1.3.7 Blackhead

This part is intentionally blank. The character statement for Blackhead is yet to be drafted.

B1.3.8 Diamond Beach

This part is intentionally blank. The character statement for Diamond Beach is yet to be drafted.

B1.4 Inland Villages

B1.4.1 Tinonee

This part is intentionally blank. The character statement for Tinonee is yet to be drafted.

B1.4.2 Nabiac

This part is intentionally blank. The character statement for Nabiac is yet to be drafted.

B1.4.3 Lansdowne

This part is intentionally blank. The character statement for Lansdowne is yet to be drafted.

B1.4.4 Coopernook

About this part:

This part identifies the character statement for the Coopernook locality.

Applies to:

The Character Statement applies to the land as mapped in Figure 1.

Date adopted by Council:

2 December 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

The Coopernook Village Plan 2010

Introduction

This character statement applies to the village of Coopernook. The area is broken into three key areas, being the village core, village living and riverfront recreation, as shown on the following map.



Figure 1- Area to which the Coopernook Character Statement applies.

Role of the Location

Coopernook is a small inland village located on the Manning Floodplain approximately 20kms north of Taree. The village generally provides basic services to the surrounding hinterland and village residents and offers rural village living opportunities.

Current Character

The existing character of Coopernook is influenced by a number of factors, including historic settlement patterns, the current zoning of the area, the hilly topography and natural environment including proximity to the Lansdowne River and surrounding State Forests and National Park.

The current character of Coopernook has developed in response to its traditional role as a highway service village. The businesses located along George Gibson Drive (formally the Pacific Highway) are aimed at the passing highway trade, and many of those businesses have experienced financial hardship since the highway bypass opened in 2003, drawing passing motorists away from the township. Evidence of this hardship can be seen in the condition of the commercial buildings along George Gibson Drive. Some are now vacant and in a state of disrepair.

Previous to Coopernook functioning as a highway service village, the main functions of the town were around the Lansdowne River area, with a focus on the maritime assets of the village. Boat building and timber milling were established in the 1800s taking advantage of the Lansdowne River frontage. In the early 1900s, Coopernook was the main trading centre for the surrounding satellite villages and by the mid 1900s had developed to serve the passing trade from the highway. There are many items of heritage value within Coopernook, and a conservation area is applied to part of the village.

The current character of the village is largely shaped by its disjointed layout, as it spreads out along two distinct areas; the riverfront area and the village area.

Coopernook comprises residential and semi-rural lots as well as supporting services including a general store, post office, produce store, motel, hotel and service station. The village area has a number of good facilities for local residents, including a park, memorial hall and sporting oval. Coopernook is spread out between two distinct areas, the riverfront area and the village area, of which there is approximately 800m of rural land dividing the two. Connecting the two areas should be encouraged in any future development within the village, to provide cohesion and connectivity between the two core areas of activity within the community.

A key role of Coopernook is to provide services to the surrounding rural/village community. The desired future character for Coopernook is a small rural village, with improved linkages between the village area and the riverfront area. Given the rural village and historical character of Coopernook, all new residential developments should respect this history in the built form and layout of lots.

Coopernook has the potential to provide a high level of amenities to attract visitors, both off the highway and locally, particularly to the

riverfront area, and will potentially develop as a highway service village and act as a rural destination for visiting and living provided that there are improvements to tourist signs and facilities.

Desired Future Character

Riverfront Recreation

The riverfront area currently consists of an informal carpark, boat ramp, historic wharf structure, natural and exotic woodland regrowth and a hotel. The riverfront area is located within a highly scenic setting that provides excellent access to the river for boats and a large area of foreshore for both active and passive recreation. The foreshore area is currently dominated by weeds, and is littered with debris from the old bridge and its abutments.

Although the riverfront area is spatially disjunct from the village core, there is a strong sense of community identification with the riverfront area; particularly in regards to the Hotel and its function as a social node for the community, and the historical significance of the old wharf and bridge sites. There is widespread recognition amongst the community that the riverfront area provides an excellent potential tourist and community destination which is currently underutilised.

Formalisation of the car parking area and boat ramp in front of the hotel would provide benefits through increased and safer parking, and boat access to the river, thus encouraging tourists.

Regeneration of the foreshore area through weed removal and provision of amenities and outdoor furniture would also encourage use of the riverfront area. A memorial cairn and interpretive signage to commemorate the location of the old wharf area has recently been completed by the Department of Commerce, and the Coopernook Action Group and Council are currently developing plans to regenerate the foreshore and remove weeds and rubbish.

Revitalisation of the foreshore area would open up, and encourage, access to this area to provide an insight to Coopernook's historic past. It is suggested that pedestrian access to the village core should start from this point, to capitalise upon Coopernook's natural and historic assets. It is also likely that improvement of the riverfront area and a clearly identified pedestrian link between the riverfront and the village core would bring renewed vitality to the village core.

Village Core

The village core within Coopernook evokes a strong sense of place and community amongst the local residents. The residents recognise the importance of the general store and post office and the cohesion that these places create within the community. Although these are the main nodal points within Coopernook, there is also recognition that the community hall, park, oval and service station are important community facilities, with the oval being another currently underutilised community asset. The vitality of the village core could be further improved through a linkage with the riverfront area. Any further commercial development within Coopernook should be restricted to the village core to further consolidate the function of this area.

Street furniture, footpaths and cycleways are noticeably absent throughout the entire village.

Macquarie Street

Macquarie Street is a typically wide rural village road, with wide grassed areas separating the road from the footpath. It is located within a heritage conservation area, with a number of heritage listed buildings fronting the street. Whilst the village core supports the essential services, it is also composed of a large number of private residences.

The land to the southern side of Macquarie Street is low lying and prone to flooding and a high water table, until it starts to rise from West Street to the north. The houses on the northern side of Macquarie Street are set close to the footpath, with a number being heritage listed, and characteristic of various federation styles of the early 1900s. Any further development within the Village Core should respect the heritage conservation values of the area including the existing scale and setbacks within the Precinct.

Village Living

In Cooperbrook the village living zone is the area of inner residential surrounding and supporting the village core. The village living area is composed of a variety of eclectic residential house styles and themes, with a relatively high number of heritage listed buildings in good condition. The streets in the village living area are fairly consistent, and have only slight differences in setbacks, the built form, streetscape and landscape; however they all fit within the character of a rural village on the NSW north coast.

Setbacks are large and verandahs face out on to the street as views are mostly experienced to the front of the properties. Properties are generally large, and houses are mostly of a modest size, with very few dominating the block, as is characteristic of more modern housing estates. The houses within the village living area are often located in the centre of the block, and often times have a detached garage to the side of the house, particularly in the case of the older style of residence.

Kerb and gutter is present at random locations throughout the village, generally on the higher side of the street. Petrie Street, in the centre of the village, is the only street with consistent kerb and guttering, and generally has the largest setbacks and the most modern residences. The residential component of the village is reasonably contained within a defined area, surrounded generally by working farms and floodplain.

Within the village living area, West Street essentially forms the western boundary, High Street forms the north, and Bangalow Road forms the east. The southern boundary of the village is currently along low lying George Gibson Drive, which has comparatively few residential dwellings.

A number of heritage listed buildings are located within West Street, and the residences face west to take advantage of the uninterrupted scenic views across the plain to the escarpment.

High Street is located generally along the highest part of the village, on a steep slope, and residences here are mostly designed to take advantage of the views to the escarpment, both west and north, with a number of elevated houses overlooking the surrounding land. Houses here tend to be larger and more modern than in West Street.

A number of weatherboard and fibro construction houses are located along all streets, with generous yards in a low density environment, though there is no consistent architectural character to the individual buildings, and many residences also appear to have been constructed during the post-war period.

Most houses have corrugated iron roofs, typical of rural villages along the NSW north coast region, and there is a distinct lack of two-storey residences, though those in lower flood prone areas are built up to be above flood level. Within West Street there is a distinct lack of brick and tile construction houses, though there are a small number of newer residences in this style within High Street, Petrie Street and Bangalow Road.

There is no consistency to fencing style or material (though the heritage listed buildings all have traditional painted wooden fences), and front fences are absent from many residences. Gardens are generally well established though are typically simple and sparse, with most yards open to take advantage of views, and driveways are generally informal or under-stated.

Coopernook should remain as a low density, quiet rural village, with improved connectivity between the riverfront and village core areas. The heritage importance of the area, and in particular the conservation area, should be respected when considering any new development within the village.

Many residences have aesthetically pleasing views over the floodplains and escarpment, and any expansion of the village living area should give consideration to height restrictions to preserve existing views.

The scale and bulk of any future buildings should be minimised to preserve the low density nature of the village, and natural vegetation should be maintained on the outskirts of the village wherever possible to minimise disturbance to hillsides and the floodplain.

Objectives:

- A continuous wall of development along any street should be avoided.
- Wide driveways and tall fences should also be avoided, and future dwellings should display a traditional 'street address', with verandahs, decks and living rooms visible from the roadway.
- A light weight appearance is preferable for all visible facades, including fencing, to minimise their scale and bulk.
- Although there is currently no consistent character to fencing, front fencing (if desired) should generally be low, see-through or constructed of hedges or shrubs.
- Wide garages that dominate the front facade should be avoided, and new buildings should have front setbacks similar to that of surrounding properties.
- Larger block sizes should be retained and newly built dwellings should not dominate the block; a general aim should be to maintain dwelling sizes no greater than two thirds of the total block size.

Performance Criteria

1. New commercial development will be limited to the area bounded by Macquarie Street, Henry Street, George Gibson Drive and the existing motel located between Macquarie Street and George Gibson Drive.
2. New or replacement dwellings will have a setback from the street boundary equal to or greater than that existing in the immediate neighbourhood.
3. The design of new or replacement dwellings will be compatible with the style existing in the immediate neighbourhood.
4. Attached garages will be set back a minimum of 1.5m from the front facade of the building and will occupy less than 50% of any site frontage.
5. Dual occupancy development will be considered only where the allotment is of sufficient size to ensure the low density character of the village will not be compromised.

B1.5 Small Villages

B1.5.1 Rainbow Flat

This part is intentionally blank. The character statement for Rainbow Flat is yet to be drafted.

B1.5.2 Krambach

This part is intentionally blank. The character statement for Krambach is yet to be drafted.

B1.5.3 Elands

This part is intentionally blank. The character statement for Elands is yet to be drafted.

B1.5.4 Johns River

About this part:

This part identifies the character statement for the Johns River locality.

Applies to:

The Character Statement applies to the land as mapped in Figure 2.

Date adopted by Council:

14 October 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

The Johns River Post Bypass Village Plan 2010

Introduction

This character statement applies to the Village of Johns River. The area is broken into three key areas, being the Village Core, Village Living and Rural Lifestyle, as shown on the following map.

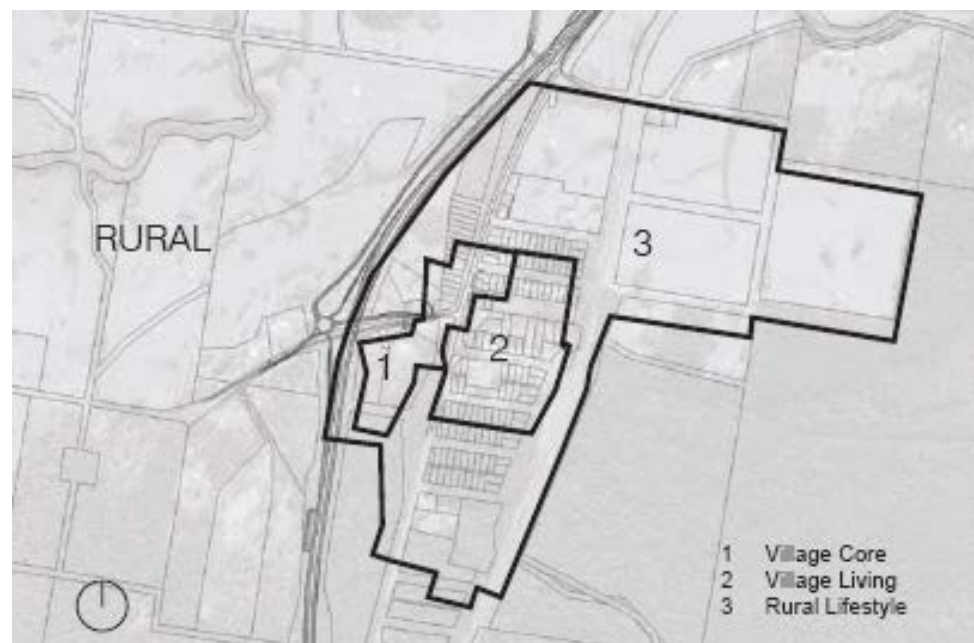


Figure 2 - Area to which the Johns River Character Statement applies

Role of the location

Johns River is a small inland village located between the major regional centres of Taree (20 minutes south) and Port Macquarie (30 minutes north). The Village provides basic support services (e.g. general store, public school, community hall, playground and tavern) to the surrounding hinterland and village residents.

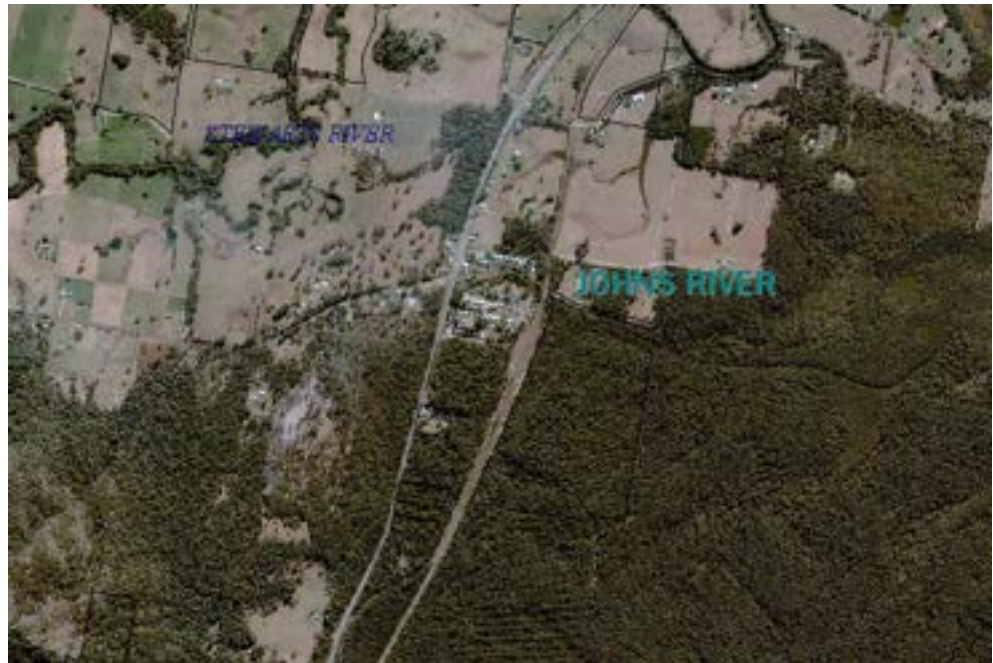


Figure 3 - Aerial photograph of the Johns River Village

Current character

Constraints

Located between Taree and Port Macquarie, Johns River is a small inland village, comprising residential and semi rural lots and support services including a general store.

The existing character of Johns River is influenced by a number of factors, including the historic settlement patterns in the area, the current zoning of the area, the topography and natural environment including the surrounding Johns River State Forest and Crowdy National Park and the key features of the Middle Brother State Forest and National Park. The current character of the village itself is also largely shaped by two dividing factors; The Main North Coast rail line, which creates an eastern end to the Village, and the Pacific Highway, which dissects the town along an east/west axis. The Pacific Highway upgrade will result in traffic by-passing the village from 2009/10.

Opportunities

The overall direction for Johns River must ensure the long term viability of the village, maintaining the residential and commercial base, school and support services provided for village and hinterland residents.

The village is located at the northern gateway to the Greater Taree City Council local government area and with the removal of traffic from the main road through the village, opportunities exist to strengthen the bushland village character and promote Johns River as a tourism gateway to Greater Taree, National Parks and beaches, providing day trip opportunities for residents of Taree and Port Macquarie and overnight accommodation (e.g B&B) for travellers.

The village has well known community markets and antique markets with a long established history, key community facilities and services that may attract travellers off the highway. The village is also supported by a strong and active community.

Heritage considerations

Johns River has a historic association with the local timber, logging and dairy industries; however, there are no heritage items in the Johns River Village.

Bulk / Scale / Form / Density Colours / Textures / Materials

Current land uses reflect the growth and development of the village over time. Street layout is the common rectilinear form. Outside the commercial area, residential lots are large (more than 1000m²), reflecting the traditional lot format and size of a semi-rural location. Housing types are single storey, timber framed, frequently with weatherboard or fibro-cement sheeting cladding.

Edges / Boundaries

The village is edged to the south and partly to the north by extensive areas of heavy vegetation and surrounding state forest. To the east the village is edged by the railway and to the west will be edged by the new highway bypass.

Future expansion of the village may be constrained by these edge boundaries.

Focal Points / Nodes

Currently the Community Hall and Oval, the General Store and the Tavern are the key focal points of the village. These are all in the village core area and provide a sound basis for consolidating the core economic, recreational and cultural activity of the village.

View corridors

The Village of Johns River enjoys views to the Brother Mountains from most areas within the village. The natural backdrop of mountains and bushland is a defining feature of the village character.

Vegetation attributes

Johns River contains and is surrounded by extensive areas of native vegetation and natural bushland.

Spaces – Public / Private

The key public spaces at present include the community hall and associated oval and playground areas as well as the local school. There are many opportunities to enhance and better connect these areas.

Desired Future Character

Located between Taree and Port Macquarie, Johns River is a small inland village, comprising residential and semi rural lots and support services including a general store.

A key role of the village is to provide a service centre for the Rural / Village community. The desired character for the village is a small scale bushland village surrounded by National Parks and Johns River State Forest.

It is envisaged that the basic services provided for the local / rural communities will be strengthened within a pedestrian friendly village environment. The Village of Johns River demonstrates a commitment to ecological living principles.

Respect must be shown in all new residential developments, in regards to established setbacks, fencing and landscape patterns.

New Community/commercial developments will be within and reinforce the village core.

The Village of Johns River provides a high level of amenities to attract visitors off the Highway and will develop as a highway service village and attractive rural destination.

Village Core

The Village Core of any rural centre is one which creates and attracts a strong sense of vitality and place amongst the residents. This strong sense of village identity extends past the immediate village area and into the surrounding rural areas, both to the east and the west of the proposed village bypass.

Within Johns River the Village Core is largely defined by three key areas. The first of these is the community hall and playing field, located to the north of the village. The second is the central general store / petrol station as well as the residential dwellings fronting the Pacific Highway. The third key area is the stretch of Stewarts River Road incorporating the existing bus stop and turning circle and the Tavern.

Large setbacks on the western side of the Pacific Highway provide off highway parking and access to the general store. With the future reduction in traffic resulting from the bypass operation, the opportunity exists for creation of a more defined Village Core. The area could be paved and landscaped to define the village commercial centre, encouraging pedestrian access and use. Paving could lead to the community hall and playground with safe crossing locations developed in the village core. The playing field area would benefit from the installation of playground equipment.

The tavern and bus turning area are located within the village core but on the opposite side of the Pacific Highway from the other elements in the village core. Pedestrian movement within the core would be enhanced by the provision of structures to improve pedestrian safety.

Enhancement of pedestrian facilities and provision of destinations (e.g. playground at the playing fields) would encourage pedestrian activity and contribute to revitalisation of the village core. Additional business uses (e.g. café, bakery) would benefit the village viability.

Village Living

In Johns River the village living zone is the small area of inner residential surrounding and supporting the village core. The village is of a scale that the character of the streets may be considered separately. The Village Living area is composed of a variety of residential house styles and themes. Each street in the Village Living zone appears to have a consistent character associated with it, although the details of the character can vary depending on what side of the street is being

examined. In order to gain a full appreciation of the existing Village Living character, the main residential streets have been examined:

John Street

John Street forms the natural southern limit of the Village Living zone. The land to the southern side of the street is largely comprised of an established area of vegetation which forms a natural buffer to between the rural living and village lifestyle zones. This is reinforced by the unformed road surface and the large setback between the small number of houses and the road itself. The large area of open space fronting John Street (comprising the school playground) reinforces the nature of John Street as a transition from Village Living to Rural Lifestyle.

Station Street

Station Street is a key residential street within the Johns River Village. Two distinct characters are present along this street. The north western corner with the Pacific Highway is occupied by a large vegetated reserve area. West of this, the northern side of the street has a consistent built form, with a wide road reserve and the deep front setbacks to single storey timbered framed dwellings. The setback has allowed for the establishment of clumps of native vegetation, contributing to the semi-rural feel of the street. This is reinforced by the rural style of fencing that some residents have erected in the area. Houses on the southern side of the street do not experience the wide road reservation but still enjoy a deep setback and established private gardens.

Thomas Street

Thomas Street fulfils a vital role linking the Village Living and Village Core areas with the forestry and logging areas to the east of the railway line. Thomas Street is sealed. Kerb and guttering is not present. Houses on Thomas Street are single storey timber framed, weatherboard or fibro-cement clad. Setbacks are of 5 to 10 metres. Fences, where present, are of a rural style, namely post and rail or vertical pickets. Double garages are present, generally on the setback of the dwelling, and accessed via concrete or grass driveways

Village Living Conclusion

While the streets in the Village Living area have variations, particularly in setbacks, the built form, streetscapes and vegetation combine to create a semi-rural village character. The salient visual feature of the village living area is the absence of brick as a building material and the predominance of timber-based fencing styles in preference to metal fencing products. The village is characterised by low scale and low density.

Rural Lifestyle

The Village of Johns River is surrounded by a large area of rural and semi-rural properties. This Rural Lifestyle area is bordered by the proposed Pacific Highway bypass to the west, the railway line to the east, Wharf Road to the north and the former petrol station to the south. The character of this area is strongly defined by the tradition of maintained farmland flanked by large areas of bushland. This character is maintained through the use of avenue plantings on Wharf Road using non-native species. This style of planting also creates a separation between the Village Living zone and the Rural Lifestyle zone on the southern edge of the village.

The rural character of the area is maintained by unsealed roads, traditional avenue tree plantings and rural fencing. Large lot sizes result in housing being setback from the road and not impacting on the rural streetscape or character of the area.

B1.5.5 Upper Lansdowne

This part is intentionally blank. The character statement for Upper Lansdowne is yet to be drafted.

B1.5.6 Hannam Vale

This part is intentionally blank. The character statement for Hannam Vale is yet to be drafted.

B1.5.7 Moorland

About this part:

This part identifies the character statement for the Moorland locality.

Applies to:

The Character Statement applies to the land as mapped in Figure 4.

Date adopted by Council:

18 August 2010

Effective date:

27 August 2010

Related Policy / Technical Manual:

The Moorland Village Plan 2010

Introduction

This character statement applies to the locality of Moorland, a hinterland locality established on the Manning River Floodplain approximately 25km north of Taree. For the purposes of this statement, the locality is broken into three key areas, being the Northern Precinct, Southern Precinct and Rural Precinct, as shown on the following map.

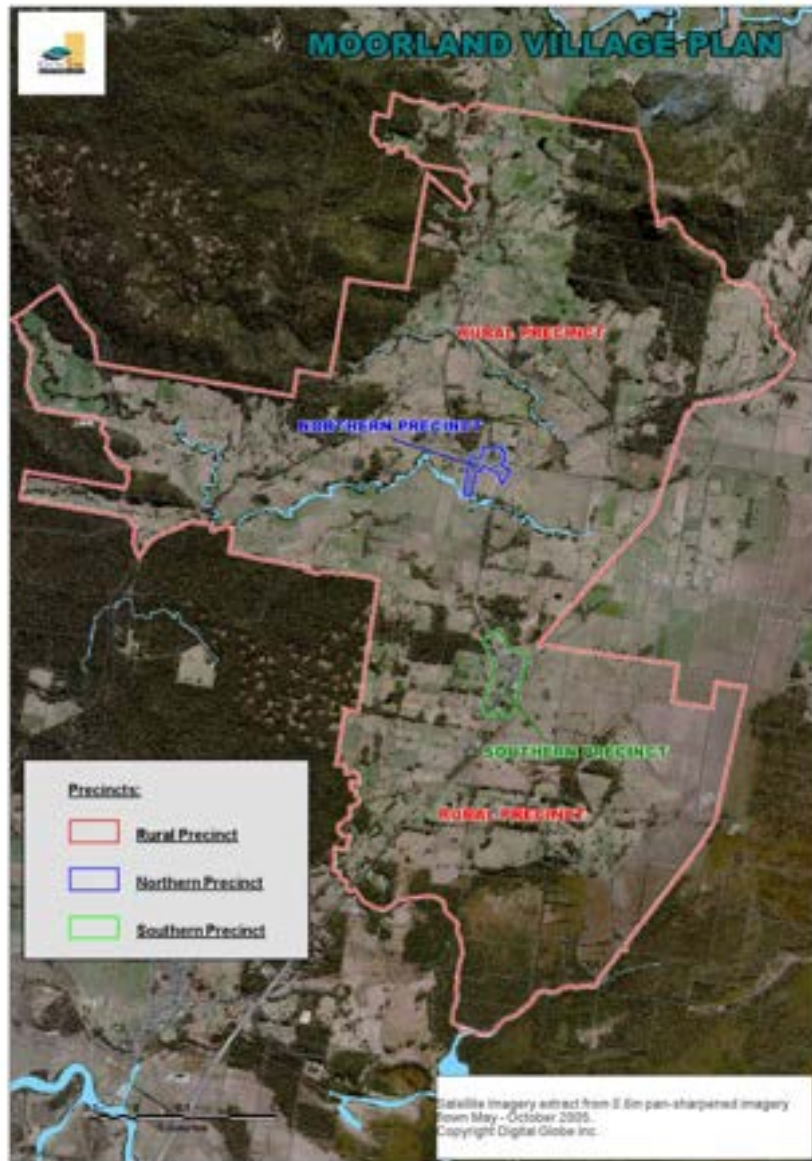


Figure 4 - Area to which the Moorland Character Statement applies.

Role of the Location

The Moorland Locality offers a variety of rural and village living opportunities and provides services to its resident and also the wider surrounding hinterland.

Current Character

The existing character of Moorland has been influenced by a number of factors, including historic settlement patterns (associated with the Pacific Highway), the current zoning of the area, the surrounding hilly topography, rural and agricultural landscapes and natural environment including proximity to State Forests and National Parks and environmental constraints such as lowland flooding.

The current character of the Moorland Locality is largely shaped by its disjointed layout, as it spreads out along two distinct areas of the Northern and Southern Precincts, of which there is approximately 2 kilometres of rural land (incorporating the Rural Precinct) dividing the two. In addition, the location of the upgraded Pacific Highway between

the two village precincts provides a major physical constraint to connectivity within the locality.

Moorland's residential and semi-rural lots support services including a café, general store, service station, primary school, community hall, sports grounds, post office, light industry and agricultural outlets. Additionally, the rural hinterland area of the locality supports small scale agricultural and tourist business and industry.

The three village precincts of the Moorland Locality are detailed below.

Northern Precinct

The Northern Precinct character area includes formal low density residential land use along Church Street, James Street and Hannam Vale Road. The Northern Precinct is composed of a variety of eclectic residential house styles and themes. The streets in the village area are fairly consistent, and have only slight differences in setbacks, the built form, streetscape and landscape; however they all fit within the character of a rural village on the NSW Mid North Coast.

Properties are generally large, and houses are mostly of a modest size, with very few dominating the block, as is characteristic of more modern residential areas. The houses within Moorland are often located in the centre of the block, and oftentimes have a detached garage to the side of the house, particularly in the case of the older style residences. Building materials used in residential houses within Moorland include weatherboard and some brick. Most houses have iron roofs. This theme is also repeated throughout the Southern Precinct.

Kerb and gutter is noticeably absent throughout the Northern Precinct. The residential component of the Northern Precinct is reasonably contained within a defined area, surrounded by working farms, floodplain and state forest.

The existing character of the Northern Precinct conveys a strong sense of place and community amongst the local residents. The residents recognise the importance of key community facilities such as the local school, sports fields, community hall and post office and the cohesion that these places create within the community. These key community facilities represent a sub-precinct of the locality that provides many services and facilities that are critical to the wider community.

Southern Precinct

The Southern Precinct is of similar character to the Northern Precinct in that it has evolved as a rural service locality. However, it can be noted that this Precinct has also been heavily influenced by the Pacific Highway that had previously bisected the Precinct.

The current character of the Southern Precinct of Moorland has developed in response to its traditional role as a highway service village. The businesses located along the Old Pacific Highway are generally aimed at the passing highway trade and many of those businesses have experienced financial hardship and even closure following the opening of the Moorland Bypass in early 2010.

Subsequently, in addition to maintaining the rural character of the Village and improving amenity through the implementation of this

statement, there is also a need to redefine the area as a community orientated Precinct rather than simply as a highway service village.

Setbacks, housing styles and building materials throughout the Precinct are of similar nature to the Northern Precinct. A number of weatherboard and fibro constructed houses are located along all streets, with generous yards in a low density environment. Many residences also appear to have been constructed during the post-war period though there is no consistent architectural character to the individual buildings.

There is no consistency to fencing style or material and front fences are absent from many residences. Gardens are generally well established, typically simple and sparse with most yards open to take advantage of views. Driveways are generally of an informal or modest nature.

The Southern Precinct also provides a number of services to the local community including a convenience store, service station, nursery, orange juice factory and various other small scale rural industries.

Rural Precinct

The Rural Precinct is an important part of the Moorland community as it defines the character and qualities of the locality to residents and visitors to the area.

Many of the rural holdings within this Precinct enjoy uninterrupted scenic views across the floodplain to the escarpment, South Brother Mountain and other rural and forested landscapes.

The Rural Precinct currently supports small scale businesses such as bed and breakfast accommodation, cafes, craft stores, road side stalls and nurseries. Such businesses and ongoing farm operations are crucial to the economic viability and sustainability of the Moorland locality.

The Rural Precinct provides the opportunity for the growth and development of small scale agricultural and tourism enterprises to provide a source of income for residents, while also providing an alternative lifestyle choice to suburban living in adjacent villages and towns.

Desired Future Character

The desired future character of Moorland is that of a low density, quiet rural locality, with improved connectivity between the village precincts. Given the rural/village character of Moorland, all new development should respect its history, built form and layout.

Moorland has the potential to provide a high level of amenities to attract visitors due to the unique character of the locality and the surrounding environmental attributes. This will allow the locality to develop as a rural destination for visitors and residents provided that there are improvements to general amenity of village areas and promotion of local services and points of interest.

The community sub-precinct within the Northern Precinct of the locality will be preserved and enhanced to ensure that the community association with this area is maintained and strengthened. Enhancement of this Precinct will be achieved through improving formal pedestrian connectivity, improving existing facilities such as the

community hall and sports fields and improving village amenity through tree planting and urban renewal.

Character and amenity will be enhanced throughout the remainder of the locality through tree planting, urban renewal and the redefinition of public infrastructure within the Southern Village Precinct. In relation to the Southern Precinct, these actions will integrate the Precinct into a community orientated rural village to provide a more community orientated environment for residents and visitors.

Improvement of the cohesion and connectivity between the North and South Village Precincts through safe pedestrian and motorist links must be encouraged into the future. This will ensure that all residents have easy and safe access to the community services provided in the north of the locality following the establishment of the Moorland Bypass.

Economic development should also be promoted throughout the locality through facilitating the expansion of local small scale businesses through mechanisms such as appropriate land use planning and business promotion.

Many residences have aesthetically pleasing views over the floodplains or escarpment, and any intensification or change in land use within the area should give consideration to height restrictions to preserve existing views.

Economic development and growth within the rural precinct should be confined to small scale agricultural based activities and small scale tourism so as to preserve the existing qualities of the locality while facilitating enhanced community development and wellbeing.

Natural vegetation should be maintained throughout the locality in order to ensure the ongoing preservation of the natural environment and maintain and strengthen the association of the locality with surrounding natural areas, including State Forests and National Parks.

Objectives:

- Further fragmentation and alienation of resource lands through subdivision should be avoided within the Rural Precinct to sustain the viability of agricultural activities.
- The scale and bulk of any future buildings should be minimised to preserve the low density nature of the locality.
- Wide driveways and tall fences should also be avoided and future dwellings should display a traditional street address, with verandas, decks and living rooms visible from the roadway.
- A light weight appearance is preferable for all visible facades, including fencing, to minimise their scale and bulk.
- Front fencing (if desired) should generally be low, see-through or constructed of hedges or shrubs.
- Wide garages that dominate the front facade should be avoided, and new buildings should have front setbacks similar to that of surrounding properties.
- Larger block sizes should be retained and new buildings should not dominate the block.

Performance Criteria:

1. New or replacement buildings will have a setback from the street boundary equal to or greater than that existing in the immediate neighbourhood.
2. The design of new or replacement buildings will be compatible with the style existing in the surrounding area.
3. Attached garages will be set back a minimum of 1.5m from the front facade of the building and will occupy less than 50% of any site frontage.
4. Dual occupancy development will be considered only where the allotment is of sufficient size to ensure the low density character of the village will not be compromised.

B1.5.8 Bobin

This part is intentionally blank. The character statement for Bobin is yet to be drafted.

B1.5.9 Croki

This part is intentionally blank. The character statement for Croki is yet to be drafted.

B1.5.10 Killabakh

This part is intentionally blank. The character statement for Killabakh is yet to be drafted.

B1.5.11 Wherrol Flat

This part is intentionally blank. The character statement for Wherrol Flat is yet to be drafted.

B1.5.12 Marlee

This part is intentionally blank. The character statement for Marlee is yet to be drafted.

B1.5.13 Mount George

This part is intentionally blank. The character statement for Mount George is yet to be drafted.

B1.5.14 Burrell Creek

This part is intentionally blank. The character statement for Burrell Creek is yet to be drafted.

B1.5.15 Dyers Crossing

This part is intentionally blank. The character statement for Dyers Crossing is yet to be drafted.

B1.6 Rural residential lands

This part is intentionally blank. The character statement for rural residential lands is yet to be drafted.

B1.7 Rural lands

This part is intentionally blank. The character statement for rural lands is yet to be drafted.

Part C

Subdivision Requirements



Greater Taree
CITY COUNCIL

PART C SUBDIVISION REQUIREMENTS

Contents

C1. Subdivision.....	3
C2. Introduction	4
C2.1 General design principles	4
C2.2 Application.....	5
C2.2.1 Approval process	5
C3. General requirements	6
C3.1 Site hazards.....	6
C3.2 Road design and construction.....	8
C3.3 Filling and levelling	10
C3.4 Services	11
C3.5 Drainage.....	12
C3.6 Existing development and heritage	14
C3.7 Environmental protection.....	15
C3.8 Landscaping	16
C4. Specific requirements	19
C4.1 Residential subdivision	19
C4.2 Rural and environmental areas	21
C4.3 Commercial and industrial development	22

C1. Subdivision

About this part:

This part provides the requirements and design details for subdivision of land.

Applies to:

All subdivision development in the Greater Taree Local Government Area.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Objectives

- o Encourage the efficient use of land;
- o Protect and enhance the built and natural environment of the Greater Taree local government area;
- o Protect the amenity of existing development by ensuring a high standard of design and construction in new subdivisions;
- o Ensure that all subdivisions and the potential impacts of such subdivisions and subsequent development take account of the principles of environmental sustainability;
- o Encourage solar efficient subdivision designs that will assist in ensuring that subsequent development is significantly more energy efficient than conventional development;
- o Encourage the implementation of environmental buffers and provide opportunities for repair and enhancement of natural systems, especially on land previously degraded;
- o Ensure that subdivision and housing take account of physical constraints such as bushfire, flooding, landslip etc;
- o Ensure adequate vehicular access from the gazetted public road system to each new lot;
- o Ensure all proposed lots are suitably proportioned and physically capable of development;
- o Establish a consistent and coordinated approach to the creation of residential, rural residential, rural, environmental, and commercial and industrial lots throughout the Greater Taree LGA, which ensures each lot is provided with an appropriate level of services, access and amenity, including solar access, privacy, landscaping;
- o Protect cultural resources (places of cultural and environmental heritage value) from land use or management practices which may lead to their degradation or destruction.

C2. Introduction

The impacts of land subdivision, both environmental and socio-economic, are increasingly recognised and scrutinised. Subdivision should not only occur with minimal environmental impact but also, where practical, and particularly in the case of rural subdivision, some environmental benefit should result, through repair of environmental damage, revegetation of degraded areas, establishment of vegetation and wildlife corridors and buffers.

This section provides comprehensive guidelines for the subdivision of land, where such a land use is permissible under the provisions of the current Local Environmental Plan (LEP).

C2.1 General design principles

Good subdivision design goes beyond the application of the controls outlined below.

Careful appraisal and systematic analysis of the site with consideration of all the natural and man-made constraints is required to ensure that its best qualities are used most effectively to suit the proposed development.

In determining the suitability or otherwise of any subdivision application, considerations of the following matters are important:

- Slope and orientation of land;
- Considered orientation of allotments;
- Configuration of the land to ensure future usability;
- Hazards such as soil stability, flooding, erosion and bushfires;
- Opportunities for solar and daylight access to future development;
- Design of roads, access ways and individual site access;
- Retention of special qualities or features such as trees and views;
- The scenic quality of the landscape, including protection of dominant ridge lines and hilltops, or other visually prominent locations;
- Protection of character of existing waterways;
- Availability of services and utilities;
- Provision of adequate site drainage;
- Provision of public open space;
- Possible need to retain existing subdivision character;
- Heritage and archaeological conservation;
- Adequacy of each site considering the proposed use and relevant development standards such as set backs, car parking, landscaping etc;
- The relationship of the subdivision layout to adjacent land suitable for subdivision;
- Enhancement of existing or future subdivision and village character;
- Location of boundaries along natural features such as drainage lines where appropriate in order to minimise the likelihood of soil erosion.

C2.2 Application

C2.2.1 Approval process

Consent Authority

Development consent may only be obtained by lodging a Development Application with the Council.

Development consent does not cover the detailed construction aspects of subdivision. A Construction Certificate will need to be obtained prior to commencing any construction work on site.

Certification of Works

Subdivision Certificates

Note:

The State government does not currently allow private certifiers to approve subdivisions.

A Subdivision Certificate is a certificate issued on the final plan of subdivision that authorises the registration of the plan with the Land and Property Management Authority. The certificate will be issued upon provision of evidence demonstrating compliance with all conditions of development consent.

Development Standards

Local Environmental Plan 2010 sets the minimum lot size requirements for subdivision and the corresponding dwelling entitlement. Development standards may also be included.

All applicants should refer to Local Environmental Plan 2010 to establish what the development standard is for any particular land use zone.

C3. General requirements

This section provides design guidance and standards for subdivision in all zones, where permitted under the provisions of the Local Environmental Plan 2010.

C3.1 Site hazards

Explanation

Thorough consideration of the inherent hazards of the site will ensure that any development on that site enhances and effectively uses the best qualities to suit the proposed development and minimises any potential risks to property or life.

Objectives

Should the subdivision of rural and large lot residential zoned land be likely to impact on existing vegetation, an **approval may be required from the local Catchment Management Authority under the Native Vegetation Act, 2003**

- Ensure adequate assessment of any risks to development are identified and responded to at the Development Application stage, including minimising;
- The risk of periodic inundation or flooding to development;
- The risk of damage to urban development due to unstable ground conditions;
- The risk of damage to urban development from coastal hazards including transmigration, coastal erosion and/or climate change;
- Adverse impacts of urban development such as soil erosion;
- The exposure of development to bush fire;
- Exposure to any other risk including toxic waste etc;
- Any potential risk for air safety in areas near airports.

Performance Criteria

1. Where roads and other engineering works are to be carried out, engineering plans must be lodged with the application. For detailed engineering and construction requirements for subdivision, reference should be made to Council's Auspec Development Specification. Applicants are advised to consult with Council's engineers prior to lodging an application.
2. Should the subdivision be likely to have an impact on any threatened species, populations or ecological communities, a Species Impact Statement will be required. A 7-part test will be required to be submitted with the subdivision application to indicate likely ecological impacts.
3. Where native vegetation is to be impacted, an ecological assessment, carried out by a qualified ecologist, is to be submitted with the application and the relevant approvals are to be sought.
4. Where a subdivision proposal is located on bushfire prone land, the applicant shall comply with *Planning for Bushfire Protection Guidelines* produced by the NSW Rural Fire Service.

Bushfire Safety Authority is issued as outlined in Section 100B of the **Rural Fires Act, 1997**.

Land contamination is regulated through the **Contaminated Land Management Act 1997** and **State Environmental Planning Policy (SEPP) 55 – Remediation of Land**. Applicants are advised to refer to this legislation if there is the possibility of land contamination on site.

Part E of this DCP contains the **Flooding Requirements** and should be read in conjunction with this part.

5. Where a subdivision proposal requires an on-site sewerage management system to dispose of effluent the applicant shall comply with the Development Assessment Framework in Appendix E.
6. The establishment of asset protection zones within environmental zones shall be avoided.
7. Where a subdivision proposal is on land identified as being potentially subject to landslip, the applicant shall engage a geotechnical consultant to prepare a report on the viability of subdividing the land and, if viable, provide recommendations as to the siting, the type of buildings and waste water treatment systems which could be permitted on the subject land.
8. In areas suspected to contain contaminated land, Council may require the completion of a preliminary site investigation prior to considering an application to subdivide. Should contamination be found, Council will require a detailed site investigation carried out in accordance with the Department of Environment and Climate Change guidelines for *Consultants Reporting on Contaminated Land*, followed by any remedial action plan, validation and monitoring as required. A site audit statement prepared by an accredited site auditor will be required on completion of remediation.
9. In areas subject to flooding and inundation, subdivision of land will not be permitted where any lot to be created will be fully inundated by a 1% flood and the creation of such a lot will create potential for increased intensity of development on flood prone land. In assessing whether or not land will be wholly inundated by 1% flood, Council will disregard any proposals for filling that land.
10. In areas subject to coastal hazard, subdivision design shall take into account the likelihood of short and long-term coastal recession, and dune transmigration.
11. Development within the vicinity of Taree Airport shall take into account the potential impact of the height limitations and aircraft noise on development.

C3.2 Road design and construction

Explanation

Well considered road design and location will assist with orientation of allotments, ease of access to and through the subdivision, pedestrian walkability, and enhance the natural attributes of the locality.

Objectives

- Provide roads consistent with their function within the road network, having regard to their safety and visual impact;
- Provide sufficient road reserve, carriageway and verge widths to allow roads to perform their designated functions within the road network;
- Allow all users of the road, including motorists, pedestrians and cyclists, to proceed safely, conveniently and with minimal delay;
- Provide access for emergency and service vehicles, in particular garbage service vehicles, to all dwellings;
- Provide opportunities for public transport such as facilitating connections with the bus networks;
- Provide opportunities for cycleways such as facilitating connections with cycleway routes;
- Accommodate sufficient on-street parking;
- Accommodate and co-ordinate the location of public utility services and drainage systems without adversely affecting road pavements;
- Provide road pavements and edges that are appropriate for the control of vehicle movements, perform any required drainage function, are structurally adequate and use materials that reinforce the residential function of the street;
- Minimise road construction and life cycle costs without compromising other objectives;
- Minimise the need for earthworks due to road construction;
- Ensure safe and convenient access is available to each new lot created;
- The impact of new road or access way works on existing residents should be minimized.

Performance criteria

Where subdivision involves the construction of new roads, the road network to be established shall be designed in such a manner that will enable each lot to be developed and accessed in a practical and feasible manner.

1. Road and access way construction should take account of existing topography, vegetation, open space systems and natural constraints vegetation. Cut and fill should be minimised and vegetation retained wherever practicable.
2. In cases where the road is to serve a dual function, i.e. where the road may be required to act as a drainage floodway, flows should be contained within the road reserve. Depths and velocities will be restricted in accordance with the design criteria included within *Australian Rainfall and Runoff I.E (Aust) 1987*.

Applicants are advised to refer to the:
Guide to Traffic Engineering Practice
 published by NAASRA, and
Policies, Guidelines and Procedures for Traffic Generating Developments
 published by the Roads and Traffic Authority of NSW.

3. Unless specified elsewhere in this Part, the configuration of road shall accord with Council's Auspec Design Specification and other approved standards referenced therein. Pavement widths, depths and similar requirements are contained in this document.
4. Streets should not operate as through traffic routes for externally generated traffic.
5. Access from individual lots to major roads should be minimised. The use of minor roads for such access is desirable wherever practicable.
6. The applicant shall be responsible for connecting new to existing road construction. Where a subdivision adjoins an existing road of a standard less than Council's current standard, full width or half-width plus 3m road pavement construction, kerbing, footpath, and ancillary drainage shall be provided along the full length of the frontage to approved standards.
7. All roads to be dedicated to Council are to be constructed to Auspec Design Specification Standards.
8. Roads and lots should be located so that residential dwellings are not subjected to unacceptable traffic noise.
9. Street name signs shall be erected at the junction of all roads in the subdivision in accordance with Council's guidelines. Proposed street names shall be submitted to Council for approval prior to use.
10. The road network should facilitate walking and cycling within the neighbourhood and pedestrian and cycleway connections to local activity centres.
11. The alignment of footpaths should allow safe and convenient use by pedestrians and cyclists and should be variable enough to accommodate trees and other significant features.
12. Pedestrian and cyclist paths should be constructed to provide a stable and attractive surface for projected users which is easily maintained and meets the criteria of *Crime Protection Through Environmental Design* (CPTD).
13. Bus routes and stops to be provided in accordance with the required standards.

C3.3 Filling and levelling

Explanation

Filling and levelling has the potential to significantly alter the natural landscape, drainage and stability of the landscape. Development should integrate with the existing landscape and minimise the need for cutting and filling of land, where possible.

Objectives

- o Minimize the impacts of cutting and filling on natural and built environments.

Performance criteria

1. Siteworks are to be planned to allow topsoil to be stripped, stockpiled and reused on the site. No soil is to be removed from the site without consent.
2. Filling and levelling shall not adversely affect adjoining land and shall be carried out to Council's satisfaction, as indicated on approved engineering plans.
3. The quality laying and compaction of fill will be required to meet Council's engineering standards. Geotechnical certification may be required to indicate compliance with Council's engineering standards and relevant Australian Standards.
4. Levels shall generally be adjusted so that lots drain to the street and/or the stormwater drainage system. Where required, a system of inter-allotment drainage shall be installed to prevent or ponding of water, or intensification of runoff on to adjacent land.
5. Cutting and filling should be planned to minimise damage or disturbance to existing vegetation.
6. Erosion control and sediment control principles shall be implemented in accordance with Part G of this DCP.

C3.4 Services

Objectives

- Provide public utilities to each allotment, generally within road reserves, in an efficient and cost-effective manner;
- Maximise the opportunities for shared (common) trenching and reduced restrictions on landscaping within road reserves;
- Ensure rural, residential, industrial and commercial areas are adequately serviced in a timely, cost-effective, coordinated and efficient manner.

Performance criteria

1. All lots to be created in unsewered areas must be provided with suitable means of effluent disposal in accordance with the requirements of Council's *Onsite Sewage Development Assessment Framework* (DAF 2012) in Appendix E.
2. Reticulated water and sewerage services shall be provided to all lots within urban (with the exception of lots in zone R5 shown on the lot size maps as having a minimum lot size of 10,000m² or 15,000m²) and Industrial and Commercial areas.
3. In Rural, Environmental and R5 Large Lot Residential areas shown on the lot size maps as having a minimum lot size of 15000m² each lot shall be capable of supporting a suitable onsite sewage management system in accordance with the requirements of Council's *Onsite Sewage Development Assessment Framework* (DAF 2012) in Appendix E.
4. Reticulated electricity supply shall be made available to all lots. Underground power shall be provided to all lots in urban, commercial and industrial areas.
5. Provision of written evidence of compliance with the requirements of all relevant service authorities shall be supplied by the applicant prior to release of construction certificate or subdivision certificate, as may be appropriate.
6. Compatible public utility services should be located in common trenches so as to minimise the land required, soil erosion and the cost of providing the services.
7. Adequate buffers should be maintained between utilities and houses to protect residential amenity and health.
8. The provision of utility services should not detrimentally impact on the landscape character of an area, or detrimentally impact vegetation corridors.

C3.5 Drainage

Objectives

- Provide an efficient and effective stormwater system which can be maintained economically;
- Facilitate the principles of integrated water cycle management and water sensitive urban design;
- Provide a stormwater system which utilises open space in a manner compatible with other uses;
- Control flooding and enable access to allotments, stabilise the land form and control erosion;
- Prevent stormwater damage to the built and natural environment;
- Provide overflow paths to convey large stormwater flows to trunk drainage systems;
- Minimise urban run-off pollutants to watercourses;
- Prevent both short and long term inundation of development;
- Prevent risk to human life or property;
- Prevent soil erosion and sedimentation.

Performance criteria

1. Drainage systems shall be designed and constructed in accordance with Council's Auspec 1 Design Specification. Natural drainage systems should be incorporated into designs where possible.
2. The major system must be able to accommodate the ARI=1:100 year and meet the safety criteria of the current Australian Rainfall & Runoff (AR&A). If capacity is limited in some way the underground (minor) system must be capable of safely conveying the balance. The minor system shall have a minimum capacity of 1:5 year ARI.
3. Drainage from subdivision sites should be consistent in both water quality and quantity terms with the predevelopment storm water patterns ie, neutral or no net increase on water quality and quantity. (This clause overrules the Table 4.2 in Council's Stormwater Management Plan 2000)
4. Water quality in water courses near subdivisions is to be protected by way of appropriate structures and/or filter mechanisms.
5. Drainage systems should be designed so as to ensure safety and minimise the likelihood of storm water inundation of existing and future dwellings.
6. Adequate provision should be made for measures during construction to ensure that the landform is stabilised and erosion controlled.
7. Where subdivisions drain either directly or indirectly into natural waterways, careful consideration of the impact of the development on erosion, pollution and sediment loading will be required.

8. Easements to drain water, shall be created over drainage channels, pipelines and associated works located within the proposed allotments. Proposals may require the creation of easements over downstream properties for drainage purposes.
9. Pump systems will not be permitted for other than underground car parking in large sites.
10. Drainage reserves may be required over natural and artificial watercourses.
11. Consideration will be given to the likely effects of flooding in determining any application. Land will generally be required to be filled to the General Flood Planning Level. Any development shall conform to Part E of this DCP and particular flood management plans where relevant.
12. Works as executed drawings are to be supplied upon completion of works.
13. Erosion control and sediment control principles shall be implemented in accordance with Part G of this DCP and details to be provided at the Engineering design stage in accordance with the principles outlined in the publication *Managing Urban Stormwater, Soils and Construction* issued by the Department of Housing (commonly known as the *Blue Book*).
14. Integrated water cycle management and water sensitive urban design principles shall be incorporated into the drainage design.
15. Drainage from existing dwellings to the subdivision shall be allowed for in the design by way of interlot drainage and easements.

C3.6 Existing development and heritage

Objectives

- Ensure future development relates to existing development in a manner which minimises any potential adverse impact on the existing development;
- Ensure protection of European and Aboriginal heritage.

Performance criteria

1. Subdivision design is to take into account and integrate with the location of adjoining development and surrounding subdivision patterns, especially adjoining residential development, in the design of roads, open space and in the location of lots. Where there is an established street setback pattern or streetscape, this is to be followed.
2. Subdivision is to be designed to be able to integrate and connect with future adjoining land subdivisions.
3. Landscape buffers or like features shall be incorporated within subdivision design to provide separation between land uses where conflict may arise.
4. Subdivision should be sympathetically designed to minimise the impact on heritage items of the subject land or adjoining lands.
5. Subdivisions should be sympathetically designed to ensure that the existing heritage value of the streetscape and character of the area is maintained.
6. Adequate curtilage is to be provided around heritage items to provide an appropriate buffer.
7. A subdivision proposal on land within a conservation area and/or on land which contains, or is adjacent to, an item of environmental, Aboriginal or European heritage should illustrate the means proposed to preserve and protect such items. In this respect a heritage impact statement should accompany the application.

Some development on coastal lands is regulated through **State Environmental Planning Policy (SEPP) 71 - Coastal Lands**. Applicants are advised to refer to this policy if the site is a coastal location.

Applicants are advised to consult with Council to determine whether subdivisions will constitute **'Designated Development'** and require an Environmental Impact Statement.

This part should be read in conjunction with Part G for criteria for **site design** and **erosion and sediment control**.

C3.7 Environmental protection

Objectives

- Protect and minimise the risk of degradation of unique or sensitive environments such as wetlands, littoral rainforests, estuarine and coastal areas and ecosystems;
- Protect the scenic quality of a locality.

Performance criteria

1. Vegetation cover should be retained wherever practicable.
2. Vegetation should be enhanced where it forms a link to other bushland areas, buffer zones, wildlife corridors and the like.
3. Allowance for the movement of fauna species on sites should be maximised to maintain biological diversity.
4. Vegetation which is scenically and environmentally significant should be retained.
5. Vegetation which adds to the soil stability of the land should be retained.
6. All subdivision proposals should be designed so as to minimise fragmentation of bushland.
7. Opportunities for revegetation will be pursued as part of the subdivision process as a trade off for site development and as a means of value adding to the environment. In particular, revegetation of any existing creeks, streams and drainage lines, or repair and revegetation of eroded or otherwise degraded areas should be considered.
8. Degraded areas are to be rehabilitated as part of the subdivision.
9. Watercourses and drainage lines to be retained as part of the subdivision scheme and are to be stabilised and revegetated with appropriate native species.
10. Environmentally sensitive areas are to be preserved and enhanced with appropriate native vegetation and buffers where necessary.

C3.8 Landscaping

Explanation

Planting can contribute a great deal to the visual character of a local area. Landscaping is an important consideration at the subdivision design stage to ensure that existing vegetation and landscaping opportunities are an integral part of this design process. Landscaping in this instance includes vegetation conservation, public and private open space areas, street tree planting and the like.

Objectives

- Ensure that landscaping is considered as an integrated part of the design process;
- Retain and enhance significant trees and exiting vegetation that may contribute to a local area landscape quality;
- Maintain the ecological balance of the local area, using indigenous plants planting known to suit local conditions;
- Maintain the visual amenity of existing streetscapes and enhance the appearance and amenity of development;
- Maintain existing levels of density of trees.
- Ensure no adverse impact on amenity or structure of adjoining properties.

Performance criteria

1. The overall design of any subdivision, whether residential or rural residential, should set aside open space which incorporates existing trees where practical.
2. Housing sites should be confined to below ridgelines, so as not to become the dominant feature of the landscape.
3. Flat cleared land should be set aside for active recreation.
4. In approving a subdivision application Council may require the lodgement of a Landscape Plan to the satisfaction of Council and the undertaking of works as documented therein. These plantings shall be continuously maintained for a minimum of twelve (12) months.

Residential subdivision

Every new residential lot shall include street tree details in the landscaping plan.

Prior to street tree planting in residential subdivisions the following must be determined:

- Type and classification of the road (see Essential Energy's Guidelines);
- Location of all in ground and above ground utility services;
- Councils preferred location, i.e. distance off the kerb;
- Location of traffic signals and signs. Consideration of sightlines is of prime importance (see RTA's Guidelines); and
- Street lighting considerations;

The planting theme should be simple, with preferably the use of one species per street or one species for each side of the street.

Tree species selection should be based on:

- Longevity;
- Ability to withstand disease and pest attack;
- Low water requirements;
- Minimal maintenance, e.g. pruning;
- Their ability to provide habitat for native wildlife;
- Visual amenity;
- Whether they are indigenous to the local area.

Large lot residential subdivision

The scale of the tree, i.e. their mature height and spread, should also be considered. Wide streets require larger scale trees, narrow streets, smaller scale trees. Trees that become a problem, i.e. cause kerbs to lift and break; drop seed/fruit and limbs; invade pipes and cause too much shade in adjoining residences should be avoided. Street tree planting in rural residential areas should be a natural extension of the surrounding landscape.

The pattern of natural groupings of trees should be repeated and reinforced with additional plantings. Regimented planting schemes (e.g. on grids or in lines or at regular spacings) are not advisable. The selection of trees should be confined to those naturally occurring in the area, i.e. indigenous species.

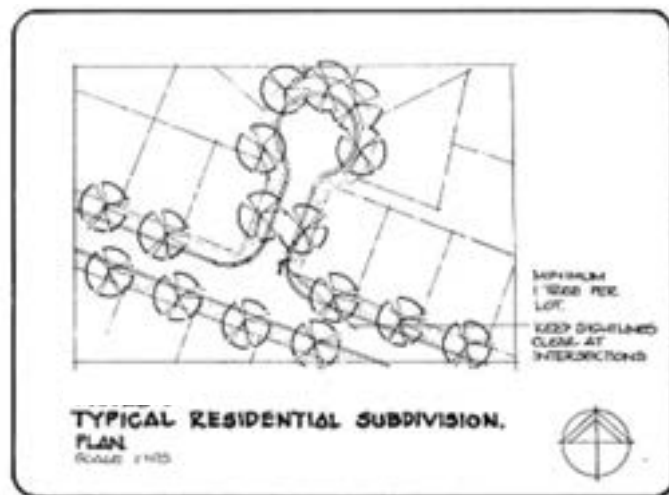


Figure 1 Typical plan residential subdivision landscaping treatment

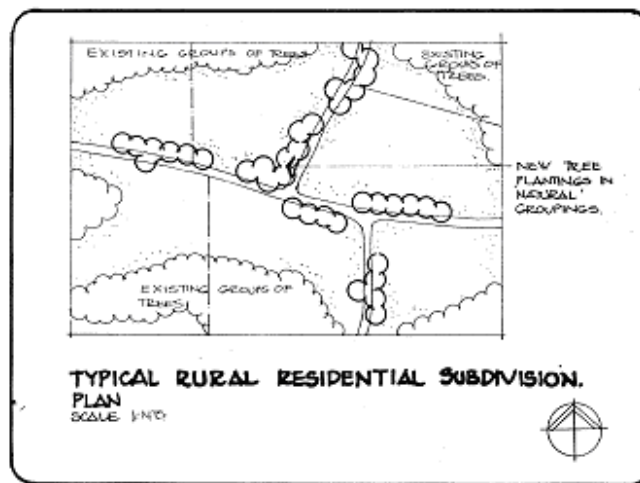


Figure 2 Typical plan rural residential subdivision landscaping treatment

C4. Specific requirements

C4.1 Residential subdivision

This part should be read in conjunction with Appendix E On-site Sewage Development Assessment Framework

Explanation

This section applies to areas that are zoned Residential, including Large Lot Residential.

Objectives

- Provide for each lot sufficient area and dimensions that will enable the construction of a dwelling and ancillary outbuildings and private outdoor space with solar and daylight access;
- Minimise potential legal issues regarding numerous users of rights of carriageway;
- Rationalise servicing within battleaxe handles; and
- Promote more orderly development of land.

Performance criteria

1. Site frontage shall be sufficient to permit vehicular and pedestrian access to the site.
2. Lots shall be of suitable dimension and orientation to ensure good solar access to future development. On roads running north-south, lots may need to be widened to provide for solar access and prevent overshadowing of dwellings and private open space.
3. Residential development will only be considered where reticulated water and sewerage is available to the proposed subdivision.
4. Each lot should have a depth to frontage ratio sufficient to avoid the possibility of 'gunbarrel' type development and permit development to respond to particular site circumstances such as orientation, topography etc.
5. Lots should be designed to allow the construction of a dwelling with a maximum cut or fill of 1m from the natural ground level.
6. Where land slopes are generally greater than 5%, road and lot design should provide for dwellings to be generally parallel with the contours to minimise earthworks.
7. Lot sizes should be increased where sites are steep or contain significant landscape features including water courses and easements.
8. Battle-axe lots will only be permitted where the size of the lot (excluding the access handle) has a minimum area of 650m². Where a reduced lot size is proposed for a battleaxe block (less than 650m²) the applicant will need to demonstrate that all other performance criteria relevant to amenity and access can be met.
9. Only one battleaxe Lot is to be created behind any full frontage lot as illustrated in Figure 3.
10. Access to a single battle-axe lot shall have a minimum width of 4m.
11. Access to two battle-axe shaped lots, when combined, shall have a minimum width of 5m.

12. Where greater than two (2) allotments are to gain access from a shared driveway a Community title arrangement should be entered into to create the roadway as a Community Lot.

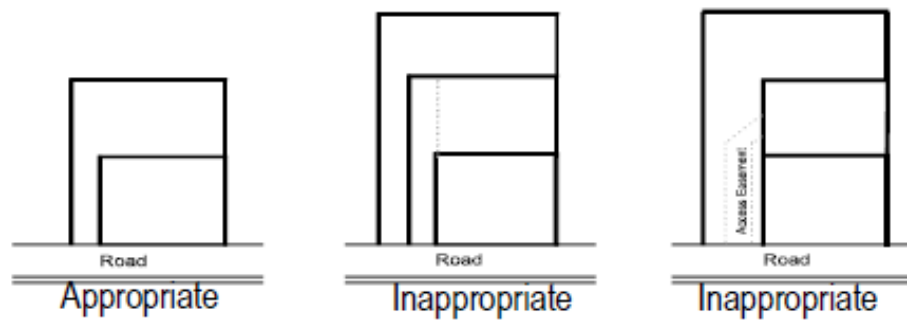


Figure 3 – Battle-axe blocks

C4.2 Rural and environmental areas

Explanation

This section applies to areas that are zoned Rural (with the exception of the RU5 Village zone) or Environmental Protection, where permitted. It does not apply to the Large Lot Residential zone.

Objectives

- Ensure that development will have minimal impact on significant views and vistas;
- Ensure that subdivision design compliments the existing cultural and landscape characteristics of the locality or region;
- Ensure appropriate access is provided to all allotments;
- Avoid the fragmentation of rural lands of significant agricultural value;
- Avoid the fragmentation and development of lands of significant environmental value.
- Building envelopes, access ways and roads shall avoid steep slopes.

Performance criteria

1. Subdivision of escarpments, ridges, and other visually interesting places should be managed in such a way that the visual impact rising from development on newly created allotments is minimal.
2. A maximum of three (3) allotments may gain access from a right of carriageway. A right of carriageway will only be acceptable where it is determined that it is not practical to provide constructed road access and that a practical access route over the right of carriageway can be achieved.
3. A frontage of not less than 200m shall be provided to any arterial road.
4. Where greater than three (3) allotments are to gain access from a shared driveway a Community title arrangement should be entered into to create the roadway as a Community Lot.

C4.3 Commercial and industrial development

Explanation

This section applies to areas that are zoned Business and/or Industrial.

Objectives

- Facilitate the development of a range of sites appropriate to the type and size of activity occurring in Greater Taree;
- Avoid fragmentation of land suitable for industrial and commercial uses and employment;
- Maintain and protect the environmental amenity of adjacent land uses;
- Provide a high level of amenity within each subdivision;
- Ensure appropriate levels of service are achieved for utilities and the road network;
- Ensure environmental constraints and impacts, such as flooding, drainage, vegetation, erosion etc are adequately considered and addressed;
- Ensure appropriate opportunity exists to reconcile issues associated with development of land including access, car parking and manoeuvring;
- Optimise land use and utility.

Performance criteria

1. The size of lots should provide sufficient space to accommodate the use and buildings envisaged, make allowance for possible future expansion and allow the site to function properly and efficiently in terms of development requirements. These requirements may relate to factors such as safe ingress and egress, vehicular movement with the curtilage of the site, parking, deliveries, storage and waste/bin areas, boundary setback requirements and landscaped areas.
2. The minimum width of a lot in an industrial zone shall be 30m at the building line.
3. Industrial subdivision will only be considered where reticulated water and sewerage is available to the proposed subdivision.

Part D

Environmental Requirements



Greater Taree
CITY COUNCIL

**PART D ENVIRONMENTAL
REQUIREMENTS**

Contents

D1 Coastline management 3

 D1.1 River Street East, Cundletown3

 D1.2 Manning coastline (excluding Old Bar to Manning Point) 5

 D1.3 Old Bar to Manning Point16

D2 Environmental buffers 21

D3 Earthworks, Erosion and Sedimentation 23

 D3.1 Earthworks24

 D3.2 Erosion and sediment control requirements.....28

D4 Vegetation Management..... 34

 D4.1 Vegetation Management34

D1 Coastline management

About this part:

This part identifies land subject to development constraints within areas identified as having risks and hazards associated with coastal processes.

Applies to:

Land within the former Greater Taree Local Government Area identified as mapped in this part.

Date adopted by Council:

26 July 2017

Effective date:

2 August 2017

Related Policy / Technical Manual:

Manning Region Coastal Zone Management Plan July 2017

D1.1 River Street East, Cundletown

Introduction

Hazard mitigation works and structures include works such as revetments and rock fillets. Boating structures include development such as jetties and boat ramps.

Coastal foreshores, whether ocean, estuary, coastal lake, river or creek are subject to dynamic processes. Development along the foreshore can accelerate erosion of the foreshore and result in flooding. Protection of the coastal hazard areas aims to ensure protection of the coastal lands/ environment and of development in the vicinity.

Objective

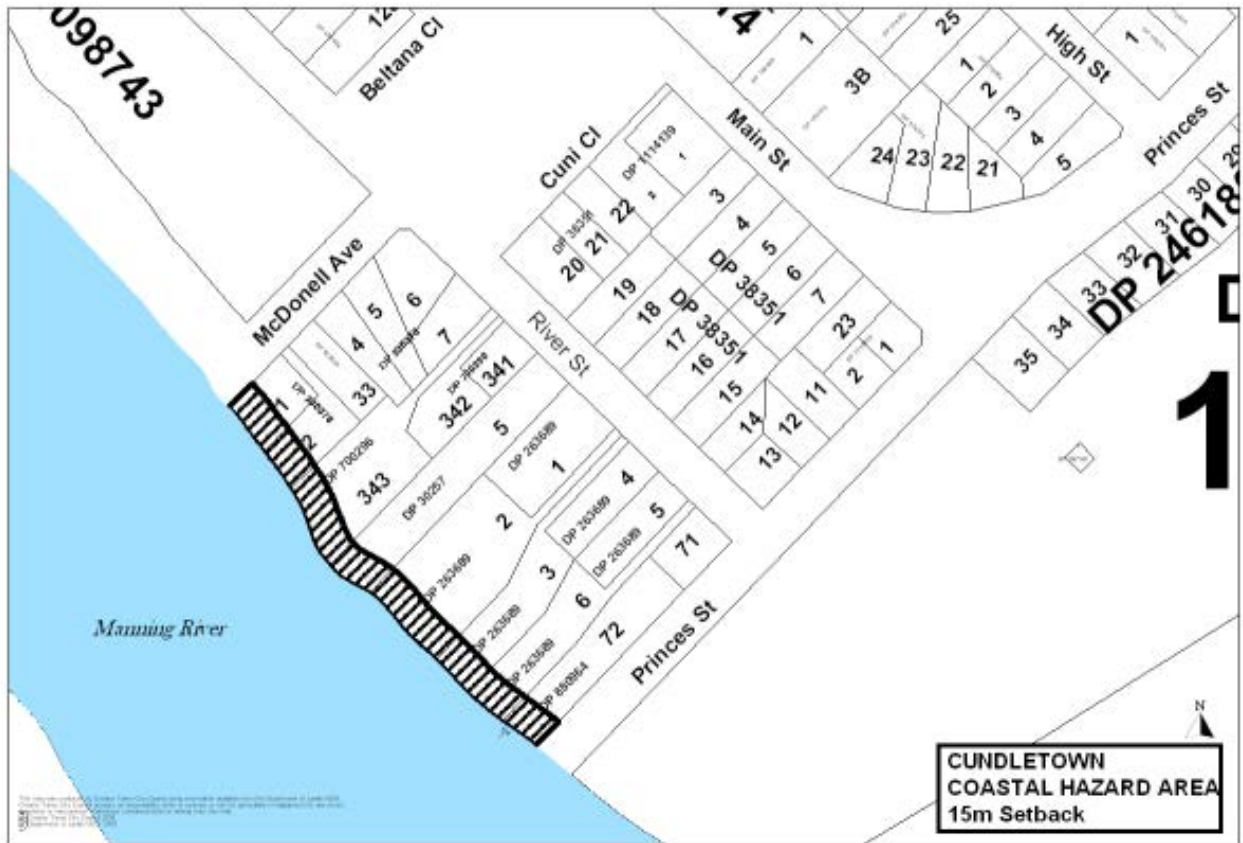
To minimise the construction of structures within areas affected by erosion.

Performance criteria

Where a setback is identified for a 'Coastal Hazard Area', development will not be permitted within this setback with the exception of hazard mitigation works and structures or boating structures.

Land affected by the part

The requirements of this part apply to land as identified in the following Map 1.



Map 1: River Street East Coastal Zone Hazard Area Setback

D1.2 Manning coastline (excluding Old Bar to Manning Point)

Introduction

For the purposes of assessment, the design life of any building or structure is taken to be 50 years, in accordance with the Building Code of Australia and Australian Standard 2870-2011.

The Coastal Planning Area, as depicted on Maps 2 – 7, can be affected by coastal processes such as erosion and wave run-up usually experienced during storm events or king tides. Climate change factors such as sea level rise are likely to exacerbate these risks in the future.

Development proposed landward of the Coastal Planning Area is not affected by D1.2.

Objectives

- To ensure that development is designed and located in response to potential coastal hazards and does not adversely impact neighbouring properties or public land.
- To ensure that development, where possible, avoids the need for physical structures or emergency works to protect the development from potential damage caused by coastal hazards.

The **Coastal Planning Area** is shown on the maps in D1.2 and represents the projected 2060 year coastal hazard line from the Manning Valley Coastal Zone Management Plan July 2017 with the addition of the area affected by the **Zone of Reduced Foundation Capacity ***** (ZRFC).

The stability of structures may be affected within the ZRFC.

Performance criteria

Subdivision:

1. All proposed allotments are to include a nominated building envelope that is located outside of the Coastal Planning Area.
2. Public services and infrastructure including sewer, water, drainage, electricity and roads are to be located outside of the Coastal Planning Area and landward of any building envelope.

New buildings:

Checklist - what do I need to address in the Coastal Risk Management Report* for my new building?

Key Question:	No	Yes
Is the new building proposed in the Coastal Planning Area	A report is <u>not</u> required for the new building - see item 1 below	A report certifying the building <u>is</u> required - see item 2 below
Is the primary road access located in the Coastal Planning Area	A report is <u>not</u> required for the road access	A report <u>may</u> be required on the road access - see item 3 below
Are the service connection points located in the Coastal Planning Area	A report is <u>not</u> required for the service connection points	A report <u>may</u> be required on the service connections - see item 4 below

1. Location - new buildings are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved, a report by a coastal engineer** certifying the structure is not required.

Ocean wave run-up refers to the height above ocean levels (including tide and storm surge) reached by the waves along our beaches.

2. Construction –

- a) New buildings within the Coastal Planning Area (in whole or part) must be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that:
 - i. the foundations and footings of the building are designed to achieve safe bearing into the stable foundation zone***; and
 - ii. the building has been designed with a minimum habitable floor level that provides adequate protection from inundation by ocean wave run-up;
- OR

- b) An alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.

3. Access –

- a) New buildings on properties where the primary road access is located within the Coastal Planning Area (in whole or part) are to be designed so that that driveway access to the building:
 - i. is provided outside of the Coastal Planning Area wherever possible; and
 - ii. access is not located between the building and the Coastal Planning Area if an alternative location is available; and
 - iii. is provided from the secondary road frontage on a corner allotment;
- OR
- b) Where access cannot be designed to meet one of the above requirements, evidence is to be submitted that the occupants of the dwelling can evacuate the property if the road access or driveway is damaged as a result of a coastal hazard.

4. Services - new buildings are to be designed so that new connections to public services and infrastructure such as sewer, water, drainage and electricity:

- a) are located outside of the Coastal Planning Area wherever possible; and
- b) are not located between the building and the Coastal Planning Area if an alternative connection point is available.

Additions and alterations:

Checklist - do I need to provide a Coastal Risk Management Report with my additions and alterations?

Key Question:	No	Yes
Is my addition within the Coastal Planning Area?	A report is <u>not</u> required - see item 1 below	A report <u>is</u> required - see item 2 below
Are my building alterations within the Coastal Planning Area	A report is <u>not</u> required - see item 1 below	A report <u>is</u> required - see item 3 below

1. Additions and alterations - are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved, a report by a coastal engineer certifying the structure is not required.
2. Additions - that are proposed within the Coastal Planning Area (in whole or part), are:
 - a) to be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the foundations are designed to ensure safe bearing into the stable foundation zone;
OR
 - b) an alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.
3. Alterations - to a building within the Coastal Planning Area (in whole or part), other than those permitted as exempt development, are to be:
 - a) accompanied by a Coastal Risk Management Report from a coastal engineer to certify that:
 - i. the alterations do not place any additional load on the existing footings of the building; or
 - ii. the existing foundations are capable of carrying the additional load and provide safe bearing into the stable foundation zone; or
 - iii. additional foundations have been designed to carry the additional load and will ensure safe bearing into the stable foundation zone.OR
 - b) an alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.

Ancillary structures:

Checklist - do I need to provide a Coastal Risk Management Report with my ancillary structures?

Key Question:	No	Yes
Are masonry structures proposed in the Coastal Planning Area	A report is <u>not</u> required	A report <u>is</u> required - see item 3 below
Are coastal protection works proposed in the Coastal Planning Area	<u>Not</u> applicable	A report <u>is</u> required - see item 4 below

1. Location - ancillary structures are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved a report by a coastal engineer, certifying the structure, is not required.
2. Lightweight structures - such as sheet metal garden sheds and detached timber pergolas do not require a report from a coastal engineer certifying the structure.
3. Masonry structures - such as swimming pools and retaining walls are permitted within the Coastal Planning Area if they are accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the structure is designed:
 - a) so that it is structurally separate from existing building/s;
and
 - b) to ensure safe bearing into the stable foundation zone.
4. Coastal erosion protection structures - must be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the structure is designed and located wholly on private land and must not cause damage to, or otherwise adversely impact, an adjacent, neighbouring or public property.

Note:

- * A report from a coastal engineer is a Coastal Risk Management Report that addresses the proposed development in relation to the *Coastal Risk Management Guide - Incorporating sea level rise benchmarks in coastal risk assessments* (2010), produced by the NSW Office of Environment and Heritage and available at: www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf
- ** Certain applications for development within the Coastal Planning Area must be accompanied by a report from a coastal engineer certifying the structure. A 'coastal engineer' is a suitably qualified and registered engineer with specialist experience in geotechnical and/or coastal marine processes.
- *** For the purposes of this DCP the **stable foundation zone** is to be regarded as natural dune material occurring **landward and/or below** the **zone of reduced foundation capacity** as defined in the Coastal Risk Management Guide. A copy of the Guide is available at: www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

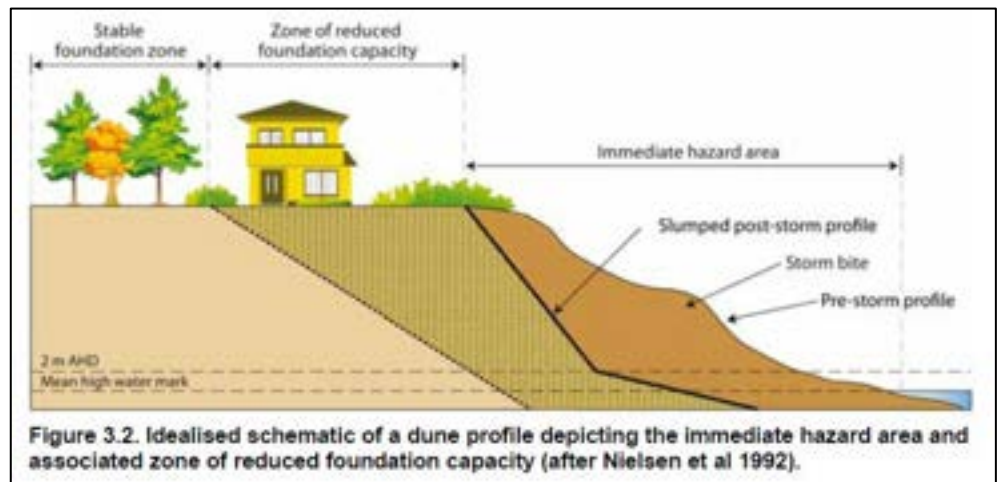


Figure 1: Diagram from NSW Office of Environment & Heritage Coastal Risk Management Guide (2010)

Additional information can be found at the following links:

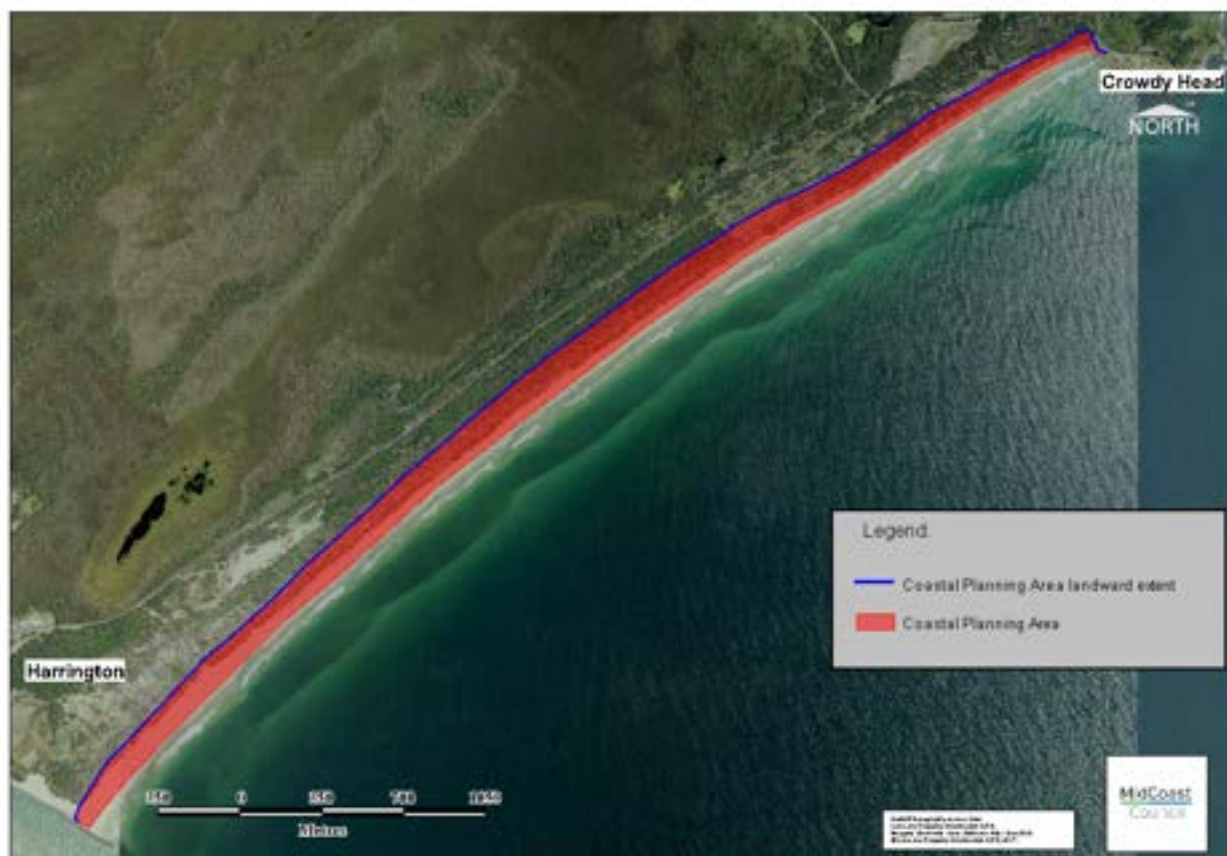
<http://www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf>

<http://www.environment.gov.au/archive/coasts/publications/nswmanual/index.html>

<http://www.legislation.nsw.gov.au/maintop/view/inforce/epi+572+2008+cd+0+N>

Land affected by the part

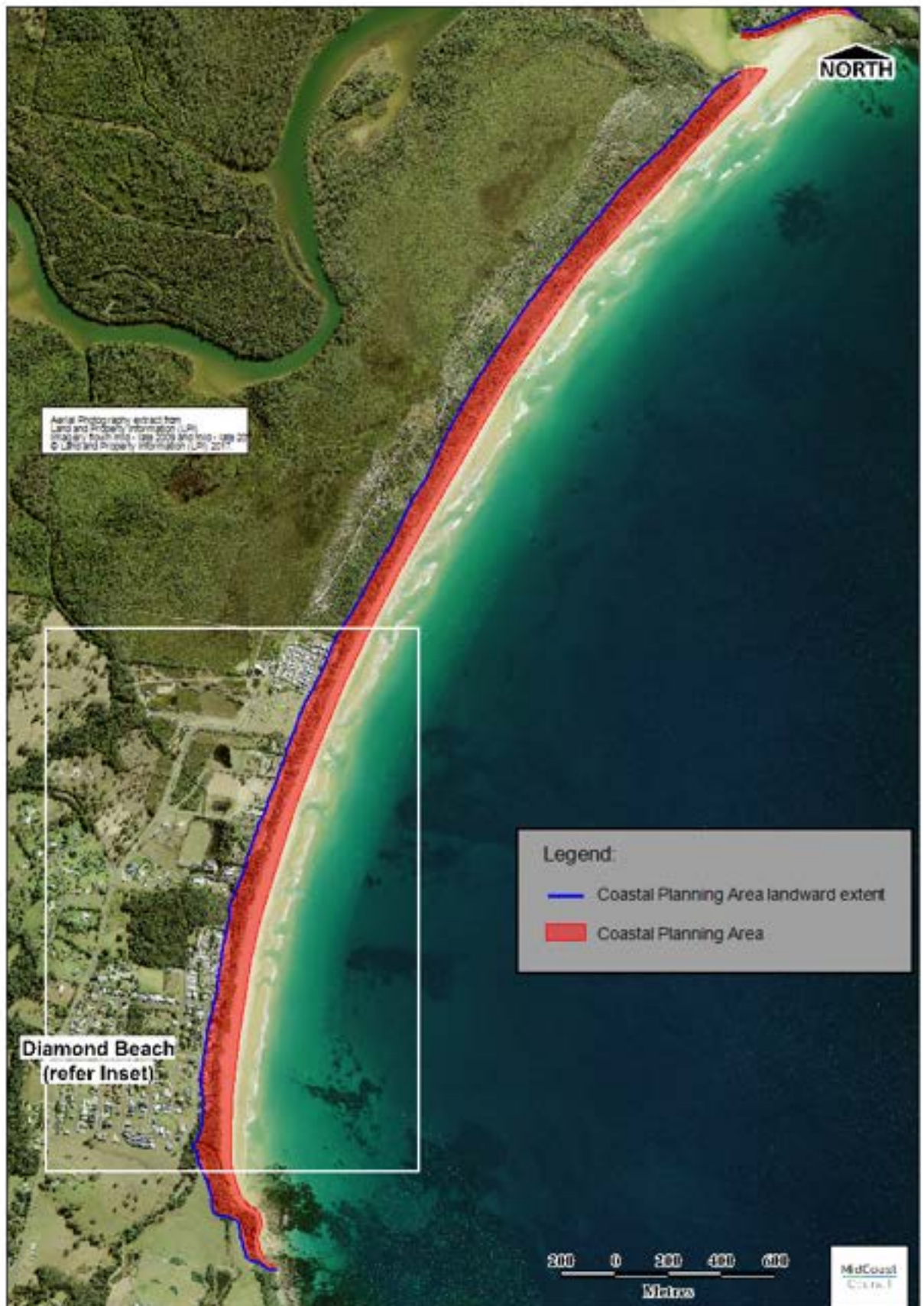
The requirements for this part apply to land as identified on the following maps as the Coastal Planning Area.



Map 2: Harrington to Crowdy Head



Map 3: Saltwater to Wallabi Point



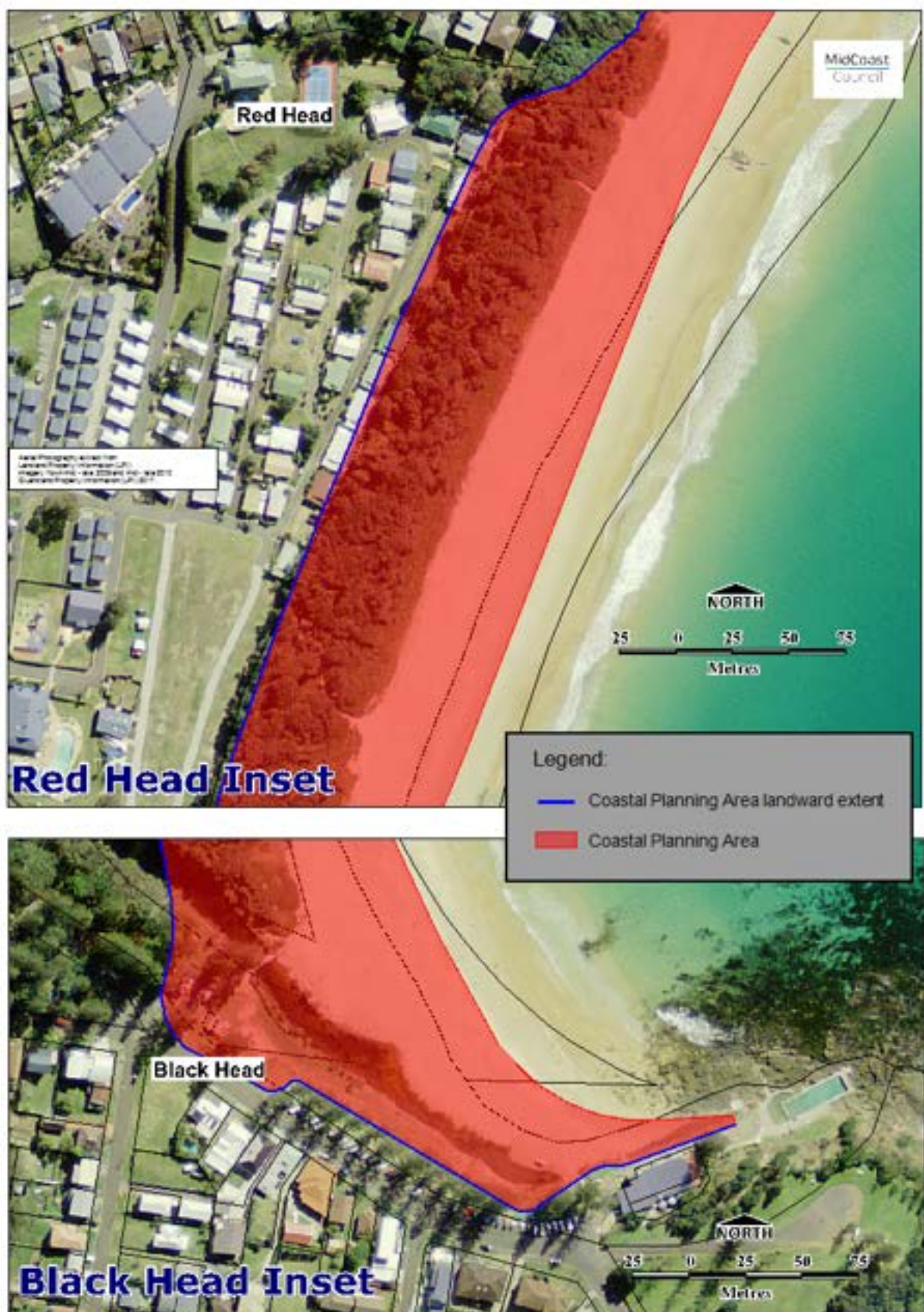
Map 4: Diamond Beach to Saltwater



Map 5: Diamond Beach Inset



Map 6: Black Head to Red Head



Map 7: Black Head and Red Head Insets

D1.3 Old Bar to Manning Point

Introduction

This area is an actively eroding coastline which is likely to experience continued beach erosion, particularly during storm events. Climate change impacts such as anticipated sea level rise is likely to exacerbate this situation.

For the purposes of coastal management these areas have been mapped and development controls identified to manage the risk posed from building in these areas. It is also important to have the landowners accept that this risk could mean the eventual removal of these structures from the land.

Development proposed landward of the Coastal Hazard Line is not affected by D1.3.

Objectives

- To ensure that development is designed and located in response to potential coastal hazards and does not adversely impact neighbouring properties or public land.
- To allow development, despite coastal hazards, where risks associated with these hazards are accepted.

Performance criteria

Development seaward of the Immediate Hazard Line

Government agencies can undertake construction in this area, as permitted under relevant legislation.

- i. Construction of structures is to occur landward of this line.
- ii. Coastal management measures can be undertaken in this area (e.g. sand replenishment and revetments) as long as they do not unreasonably affect neighbouring properties or public land and have mechanisms in place for the maintenance or removal of these following storm events.
- iii. Subdivision in this area shall not result in the creation of additional development lots.

Note: The Immediate Hazard Line is shown on the maps later in this part. The line represents the landward extent of foreshore erosion that could occur in very large storms, such as those experienced in the early 1970s along the NSW coastline. Development should be avoided in this area.

Development between the Coastal Hazard Line and the Immediate Hazard Line

A **Risk Management Plan** must be submitted for all development within this area.

1. All development applications must be accompanied by a Risk Management Plan that demonstrates that the landowner is aware of the risks applicable to the land. The complexity of the Risk Management Plan will be dependent on the size and location of the development. The Risk Management Plan must include:
 - a) An acknowledgement of the risk of developing in this area.
 - b) Details indicating how the identified risks will be managed [this could be as simple as detailing how the structure can be demolished or removed in the future].
 - c) If the development is of a scale that has the potential to generate offsite impacts, evidence of how these impacts have been considered and addressed.
2. Subdivision in this area shall not result in the creation of additional development lots.

Definitions:

1. **Coastal Hazard Line**
– the area of land which may be affected by coastal hazards that would impact upon the structural integrity of a building or development.
2. **Immediate Hazard Line**
– landward extent of the foreshore potentially lost during a major storm event.

Note:

1. By developing in this area, landowners accept that they may ultimately have to demolish or remove the structure if the coastline continues to recede.
2. For development landward of this area no development controls apply from this part.
3. Any consent for development in this area will have a condition imposed pursuant to section 88E of the *Conveyancing Act 1919* imposing a public positive covenant that serves as a mechanism to link the approved Risk Management Plan outcomes to the land in perpetuity and additionally make future purchasers aware of the coastal risks to development constructed on this land [if structures are reassessed in the future as being landward of the Coastal Hazard Line, following a reassessment of the coastal erosion hazard, then this public positive covenant can be removed].

Land affected by the part

The requirements for this part apply to land as identified on the following maps.



Map 8: Farquhar Park to Manning Point



Map 9: Old Bar to Farquhar Inlet



Map 10: Old Bar Inset

D2 Environmental buffers

About this part:

This part identifies land subject to development constraints within identified buffer areas to sewerage treatment works, abattoirs, quarries, landfill sites and other uses with potential amenity impacts.

Applies to:

Land within the former Greater Taree Local Government Area identified as a buffer area in Map 2 and/or as described in the performance criteria in this part.

Date adopted by Council:

23 October 2019

Effective date:

6 November 2019

Related Policy / Technical Manual:

Department of Planning Circular No. E3 - Guidelines for Buffer Areas Around Sewage Treatment Plants.

Introduction

Buffer areas identify locations of potential landuse conflict. Council is required to responsibly manage development within areas affected by identified buffers to sewerage treatment works, abattoirs, quarries and other sites for a variety of impacts including noise, vibration and odour.

Objectives

- Limit new development in areas that might now or in the future be subject to impacts from sewerage treatment works, abattoirs quarries and landfill sites.
- To ensure a buffer is provided between residential development and agricultural or industrial activities so as to minimise the potential for land use conflict.

Performance criteria

For a development application for land within a buffer area, Council shall consider:

1. The environmental conditions within the buffer area and any hazards likely to be encountered by the proposed development.
2. The likely risks to persons proposing to reside or be employed in the proposed development.
3. The nature and intensity of the proposed development.
4. The likely influence of the proposed development on the continued operation or potential future of any development or activity within the buffer area.
5. Any development application or development over Lot 61 DP 1252146, Lot 54 DP 1042462, Lot 8 DP 1170882 and Lot 6 DP 833772 shall include a 50-metre wide buffer as defined by Map 2. A mechanism is to be implemented to ensure any habitable building cannot be built within the buffer. Along the southern residential zone edge, a road may be constructed in the part of the buffer zoned rural provided a mechanism is implemented to ensure any habitable building cannot be built within the buffer. If a road is not provided in the part of the buffer zoned rural then

the 50m buffer is to extend north from the boundary of the residential zone.

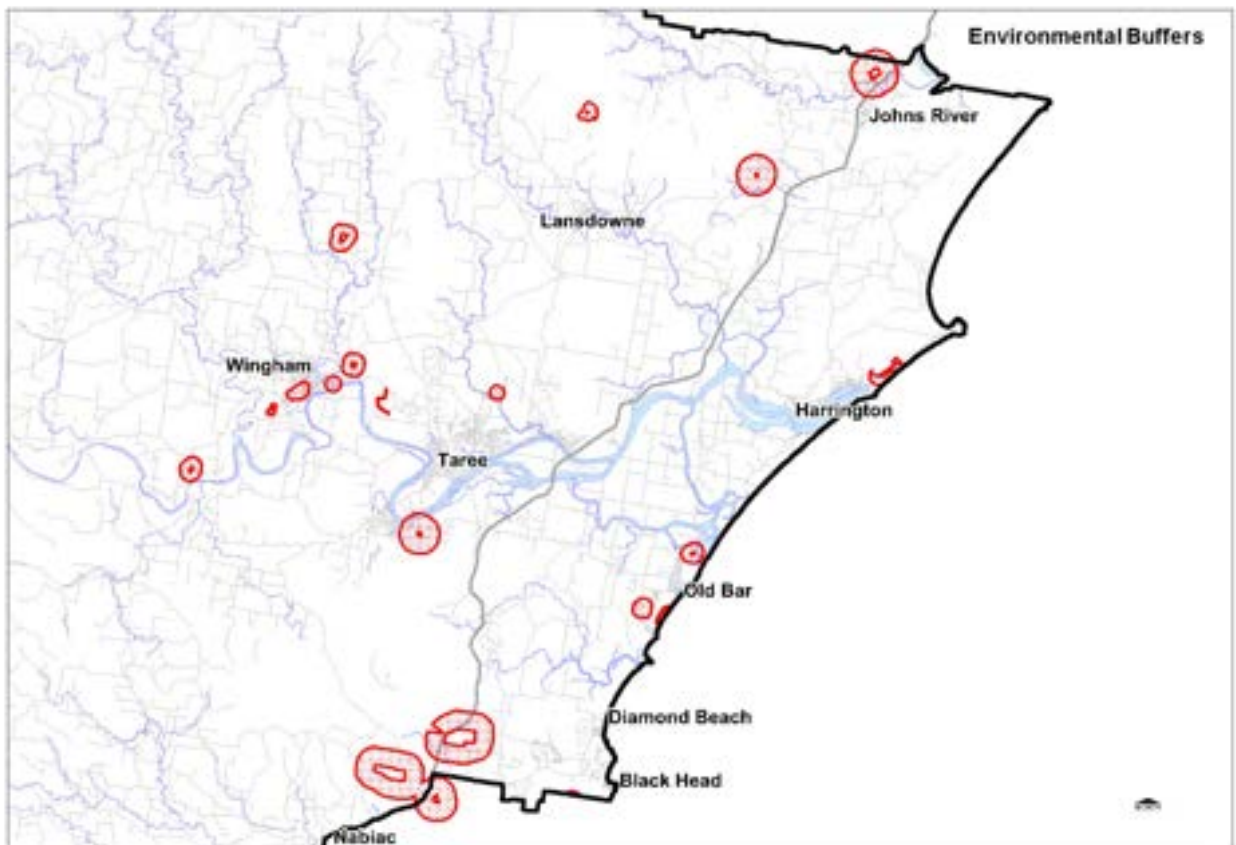
6. That:

- a) any residential development on Lot 53 DP 1042462 and any development on Lot 54 DP 1042462 and Lot 61 DP 1252146 shall include sufficient setback that ensures no adverse impacts from nearby industrial uses; and
- b) any residential development on Lot 53 DP 1042462 and any development on Lot 54 DP 1042462 and Lot 61 DP 1252146 must not adversely impact the operations of any adjoining industrial uses by causing those currently compliant industrial uses to not comply (without significant amendment to their operations) with any statutory approvals, licences, conditions or the like that are in force for those industrial uses.

These impacts are required to be demonstrated through certified air pollution, odour and noise reports.

Land affected by the part

The requirements of this part apply to land as identified in the following Map 2 – Environmental Buffers.



Map 2 – Environmental Buffers

D3 Earthworks, Erosion and Sedimentation

About this part:

This part provides the basic guidelines for earthworks and erosion and sediment control.

Applies to:

All applications for the placement of fill, building and road works, developments, subdivisions and activities which will or could involve:

- Disturbance of or placing of fill on the soil surface, and/or changes to the contours of the land;
- Change in the rate and/or volume of runoff flowing over land, or directly/indirectly entering receiving waters.

Related Policy/Technical Manual:

Greater Taree City Council's AUSPEC Guidelines 2nd Edition

Protection of the Environment Operations Act 1997

Managing Urban Stormwater- Soils and Construction Volume 1, 4th Edition (Landcom, 2004)

Managing Urban Stormwater- Soils and Construction Volume 2 A-E (Department of Environment and Climate Change NSW, 2008)

Note: Managing Urban Stormwater- Soils and Construction Volumes 1 and 2 A-E are referred to here on in as the Blue Book. Where there is an inconsistency between the Blue Book and the control measures specified in this Development Control Plan (DCP), the Blue Book will prevail to the extent of the inconsistency.

This section seeks to ensure that site planning for any proposed development takes into account the topography, geology and soils of the site and surrounding land. It also aims to minimise disturbance to existing landforms, costly earthworks and to protect existing and proposed development from becoming unstable.

This section applies to all land within Greater Taree LGA where any proposed development or land use involves the disturbance of the existing ground surface or placement of fill thereon, and/or result in changes to the shape of the land. While this will include the excavation and filling of land, it may also include significant landscaping works and topsoil stockpiling.

D3.1 Earthworks

Objectives

1. Minimise cut and fill through site sensitive subdivision, road layout, infrastructure and building design.
2. Sensitively locate dwellings to ensure minimisation of site works prior to construction of a dwelling.
3. Minimise additional earthworks of lots during the dwelling construction phase.
4. Allow land forming only where it enhances the use and character of land.
5. Ensure no adverse impact occurs to local drainage characteristics (including peak flows, velocity and depth of flow).
6. Ensure land forming operations do not silt or pollute waterways, drainage lines and wetlands, damage topography or adversely affect bushland.
7. Ensure land forming does not increase the potential for the inundation of water on any other land during the full range of flood events.
8. Ensure appropriate environmental controls are applied to conserve the landscape and protect the surrounding environment.
9. Establish, maintain and promote appropriate rehabilitation and revegetation techniques to ensure the future use of land is not adversely affected.
10. Protect and enhance the aesthetic quality and amenity of the area by controlling the form, bulk and scale of land forming operations to appropriate levels.
11. Ensure properties in the vicinity are not adversely affected by any earthwork operations during or post construction.
12. All retaining walls shall be constructed in a manner that is aesthetically compatible with the surrounding environment.

Performance Criteria

General

1. Subdivision and building work should be designed to respond to the natural topography of the site wherever possible, minimising the extent of cut and fill (i.e. for steep land houses will need to be of a split level design or an appropriate alternative and economical solution.)
2. Subdivision and building work shall be designed to ensure minimal cut and fill is required for its construction phase.

Cut and Fill and Retaining Walls – Residential Development

The following specific provisions apply to the development on rural or residential allotments only for the purposes of residential or ancillary development (as covered by Part H of the DCP).

1. The maximum amount of cut shall not exceed 1m. The maximum amount of fill shall not exceed 1m.
2. Fill within 2.0m of a property boundary shall be fully contained by the use of deepened (drop) edge beam construction with no fill permitted outside of this building footprint.
3. The use of a deepened edge beam shall not exceed 1m above natural ground level.
4. Where filling is required alongside a driveway, it shall be retained by a retaining wall.
5. Council will consider permitting greater cut for basement garages and split level designed development on steeply sloping sites.
6. All retaining walls proposed are to be identified in the development application. Excavations affecting adjoining properties are to be retained or shored immediately. All other approved retaining walls are to be in place prior to the issue of an occupation certificate.

Steep/Unstable Land

1. Development on land having a natural gradient of 1:6.7 (15%) or greater shall not be approved unless a geotechnical study, including guidelines for structural and engineering works on the land has been considered by Council.

Note: Development on sites with a natural gradient of less than 15% may also require a geotechnical assessment depending upon site characteristics

Use of Virgin Excavated Natural Material (VENM)

1. All land forming operations should involve the use of clean fill (also known as Virgin Excavated Natural Material or VENM). The VENM must also meet the same salinity characteristics of the receiving land. Council may consider alternatives to VENM on merit.

Note: *The Protection of the Environment Operations Act defines VENM as:*

"Natural material (such as clay, gravel, sand, soil or rock fines):

- a. that have been excavated or quarried from areas that are not contaminated with manufactured chemicals or process residues, as a result of industrial, commercial, mining or agricultural activities, and*
- b. that does not contain any sulfidic ores or soils or any other waste."*

Development applications which involve earthworks must be accompanied by supporting information which addresses some or all of the following issues subject to the scope and extent of the proposed earthworks:

Land

1. soil conservation;
2. landfill stability (geo-technical specification and supervision, batter slopes, compaction and treatment, and surface and subsoil drainage);
3. fill, depth, volume and quality (consolidation, leachate and stability);
4. surface levels, treatment and landscaping;
5. if there is existing unauthorised fill, a report on possible land contamination, fill quality, leachate and other detail; and
6. pre and post-development land use.

Water

1. location of watercourses and/or wetlands on the site and adjoining land and the distance between such watercourses/wetlands and the proposed land forming operation;
2. stormwater management;
3. pre and post-development flood levels and velocities;
4. stormwater pollution control;
5. easements required over channels/floodways and detention structures;
6. sullage;
7. leachate;
8. the depth of groundwater from the surface;
9. the quality of local groundwater;
10. the location of groundwater users in the area and the beneficial use of groundwater; and
11. compliance with Protection of the Environment Operations Act.

Rehabilitation (including sites where material is sourced)

1. Soil testing which identifies any soil related issues on the site e.g. potential acid sulphate soils (which may have been transported to the site and used as landfill), structural stability, plant nutrient requirements and any other plant growth limiting factors.
2. Rehabilitation/revegetation techniques must include the following:
 - land management controls;
 - water management controls;
 - rectification works; and
 - earthworks staging plan.
3. Preparation of a landscaping plan prepared by a suitably qualified person which addresses the following:
final land use;
 - vegetation to be retained and removed and rehabilitated;
 - site stabilisation proposed;
 - weed control programs to be employed; and
 - plant details (type, number, location, staking, common and botanical names and maturity details).
4. Species used in revegetation should be selected to achieve short, medium and long term soil stability and include a diversity of endemic species of local provenance.
5. Revegetation techniques may not be required for all development applications it will be dependent on site constraints.

D3.2 Erosion and sediment control requirements

Objectives

1. Avoid soil erosion through the use of effective erosion and sediment control measures both during and following any works.
2. Reduce pollution by avoiding land degradation and disturbance of vegetation on site, hence reducing pollution impact to downstream areas and receiving waters and their ecosystem.
3. Minimise costs involved in unblocking drains and water bodies, cleaning of roads and compensating for the loss of topsoil through improved sedimentation and erosion control.
4. Improve water quality by reducing sedimentation
5. Ensure dust generation is minimised.

Performance criteria

1. All development shall incorporate soil conservation measures to control soil erosion and siltation during and following completion of development.
2. An Erosion and Sediment Control Plan must be lodged with every development application. This must be prepared in accordance with the Managing Urban Stormwater – Soils and Construction, Landcom (*The Blue Book*) and Council's Engineering Specifications. The Plan is to provide appropriate erosion and sediment controls to cover the period during and after construction.
3. The standard ESCP is to identify the erosion and sediment control measures required for the site. The following information is required as a minimum in a standard ESCP:
 - a. Locality details (address, lot number, etc.),
 - b. North point and scale,
 - c. Property boundaries and adjoining roads,
 - d. Existing land contours,
 - e. Location of existing trees and vegetation,
 - f. Location of existing significant landscape features,
 - g. Existing watercourses and drains flowing through and/or adjacent to the site,
 - h. Outline of proposed building/structures and disturbed areas,
 - i. Proposed vehicular access,
 - j. Extent of vegetation to be cleared,
 - k. Extent of earthworks and limits of cut and fill,
 - l. Location of proposed stockpiles,
 - m. Location of proposed temporary and permanent site drainage,
 - n. Location of proposed temporary erosion and sediment control measures,
 - o. Location of temporary and permanent revegetation areas,
 - p. An explanation of any changes to the erosion and sediment controls as the works proceed,
 - q. Supplementary notes covering inspection and maintenance requirements.

4. Additional information is required for large or complex developments. The detailed ESCP is to provide more detailed consideration and is to be prepared in accordance with the *Blue Book*. The *Blue Book* states that an ESCP should comprise of a set of drawings showing the proposed site controls and a narrative describing how erosion and sediment control will be achieved on site. The narrative should also include proposed measures for ongoing maintenance of the installed controls. In addition to the information required for a Standard ESCP, the Detailed ESCP should include:
 - a. Soil classification and statement regarding erosion hazard and soil erodibility,
 - b. Site access and site management through the various stages of the work,
 - c. The nature and extent of regrading and filling,
 - d. Locations where ground cover will be maintained as 'no access' areas,
 - e. Topsoil storage, protection and re-use methodologies,
 - f. Catchment area and runoff calculations,
 - g. Details of the diversion of stormwater from upslope areas around disturbed areas,
 - h. Site rehabilitation including schedules and revegetation programs,
 - i. The frequency and nature of maintenance activities recommended,
 - j. Symbols key/legend,
 - k. Standard notes.
5. All disturbed areas shall be progressively rehabilitated.
6. The Plan must demonstrate that re-use of the existing soil material on the site has been implemented as far as possible.
7. All sediment and erosion controls proposed by the Plan are to be installed prior to the commencement of any construction works and appropriately maintained from the construction to stabilisation phase.
8. Appropriate dust suppression measures must be implemented during all construction works.

Soil and Water Management Plan Requirements

1. SWMP's (Soil and Water Management Plan) will include detailed calculations to determine the soil loss and the size of any sediment basins that may be required on the site. In addition to the information required for an ESCP, a SWMP should include:
 - a. The location of lots, public open space, stormwater drainage systems, schools, shopping centres/community centres (if nearby),
 - b. The location of land designated or zoned for special uses,
 - c. Location and diagrams of all erosion and sediment controls used on site,
 - d. Locations, calculations and engineering details of any sediment basins,
 - e. Location and details of other stormwater management structures such as; constructed wetlands, gross pollutant traps, trash racks or separators.

General requirements:

1. The development must ensure minimal potential or actual soil erosion through design, construction and operational controls. Controls are to prevent the export of sediment whether as windblown or by sediment laden stormwater discharges and restrict stormwater flow over exposed areas during construction and related activities.
2. Minimise the extent of soil disturbance by retaining vegetation and reducing the need for earthworks.
3. Requirements for Erosion and Sediment Control are derived from the *Blue Book*; however the following bullet points provide guidance on clearing and earthworks, drainage, erosion and sediment control devices, site access, topsoil and stockpiles, and stabilisation and rehabilitation.

Clearing and earthworks:

1. ESCPs will show the extent of land disturbance and identify vegetation to be retained,
2. Disturbance to vegetation and land will be minimised. Site excavations will be designed and located to minimise cut and fill requirements,
3. Site disturbance will be minimised by scheduling works so that one phase of work is completed and rehabilitated before commencement of another,
4. Protection barrier fencing will be installed to avoid disturbance or damage to stabilised or sensitive areas,
5. Earthworks must not commence before all ESCPs have been prepared and submitted, and required erosion and sediment control measures are installed.

Drainage:

1. All upslope run-off will be intercepted above the site and diverted around all areas to be disturbed using diversion drains, earth banks, sediment fence or sandbags,
2. Diversion drains will be made erosion proof by stabilising and bare soil should discharge safely to a sediment control structure or turfed/stabilised area,
3. Where an open drain or watercourse flows through the construction site, measures such as sandbags should be installed to decrease flow velocities and prevent sediment materials entering waters,
4. For building works, all roof guttering and downpipes will be installed and connected to an approved drainage system immediately after fixing roof material. Where stormwater management is not immediately available, downpipes should discharge away from the building site onto a stabilised area (i.e. geo-textile sheet) within the property boundary.

Site access:

1. Vehicular access to the site will be restricted to a single, well defined, all-weather access consisting of 40mm aggregate. The access location must be shown on the site plan and clearly marked out on the site using boundary markers or similar,
2. Vehicular access must be controlled to prevent sediment being tracked onto adjoining land and roads. Aggregate and sediment deposited on sealed roads should be thoroughly swept and removed to prevent this material entering the drainage system,
3. Vehicular operation within the construction site should be limited to approved areas by placement of operational boundary markers or similar,
4. Materials must not be placed in the gutter to provide access to the site.

Topsoil and stockpiles:

1. Topsoil is the best growing medium for revegetation as it contains seeds of endemic species, nutrients and organic matter essential for plant growth. It will be stripped and saved before disturbance of the work area commences, in order to maintain the viability of seed that may be stored in the soil. Topsoil stockpiles should not exceed 2m in height. Topsoil should be respread on the site as soon as practical after completion of works.
2. Stockpiles of erodible building materials or soils will not be located on a nature strip, footpath, roadway, kerb, access, reserve or watercourse without Council approval,
3. Sediment fences will be placed around stockpiles. The placement of vegetation and/or turf next to stockpiles may also reduce run-off from those stockpiles. Coverage of stockpiles with plastic or geo-textile may also be required to prevent wind erosion,
4. Stockpiled material that is scheduled to remain undisturbed for more than 14 days will be covered and stabilised to avoid erosion at the location of placement,
5. Any stockpiled or unwanted spoil remaining on site will be removed on completion of works.

Stabilisation and rehabilitation:

1. Soil stabilisation is to provide a protective cover to the soil to reduce the erosive effects of wind, rain and overland flows. Native vegetation is the most effective protective cover, but other covers including mulching, hydro-mulching, erosion matting, native turfing and chemical binders may also be used,
2. All disturbed areas should be progressively stabilised as soon as practical after completion of each stage of works,
3. Topsoil should be re-spread on site and vegetation should be reused where possible,
4. Use of vegetated terraces and/or turf strips along embankments may provide quick stabilisation for those areas,
5. All erosion and sediment control devices should be kept in place until the site is full stabilised,
6. A new area of disturbance should not be commenced until the stabilisation works for the currently disturbed areas is complete.

Erosion and sediment control devices:

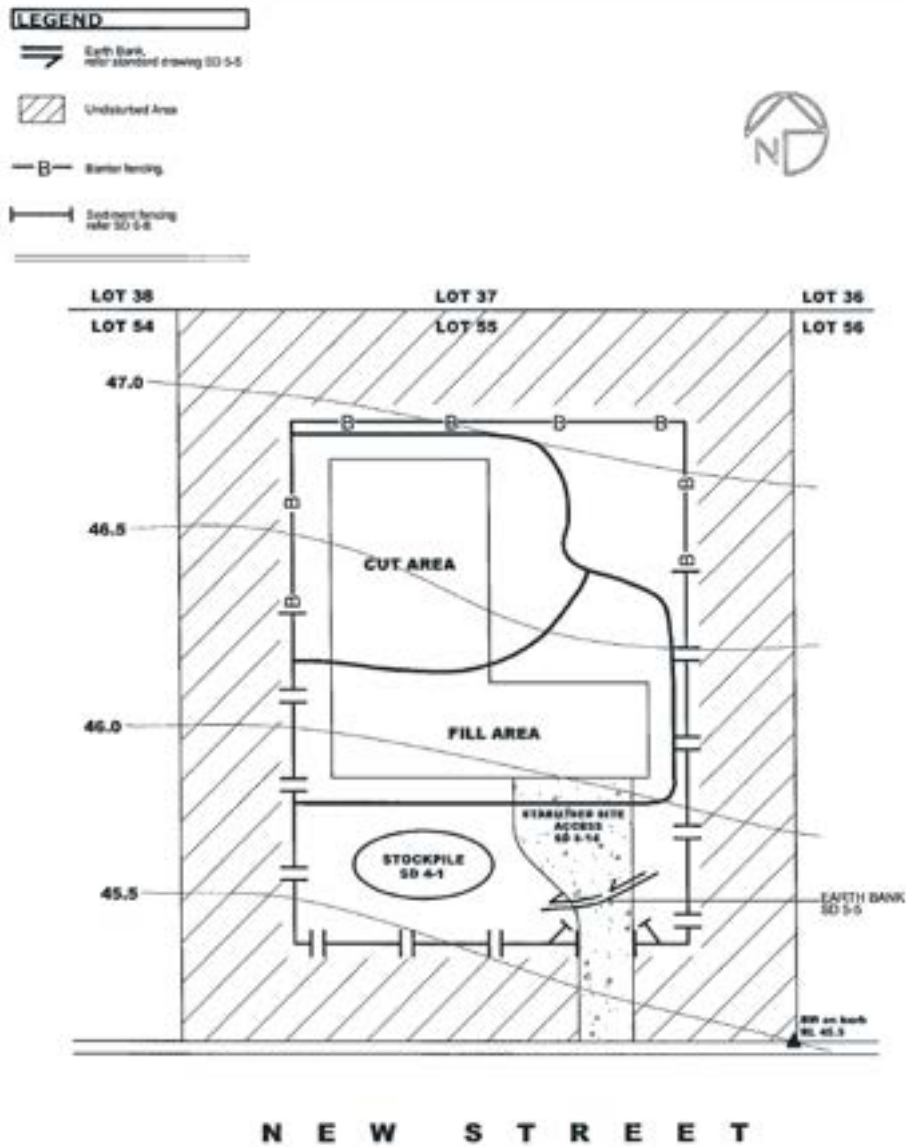
A number of options are available to prevent erosion and control sedimentation. Correct installation and the full suite of options available are outlined in the *Blue Book*.

Examples of erosion and sediment control devices include but are not limited to:

- Sediment fences or similar trapping measures are to be properly installed within the property boundary and down slope of any cleared and/or disturbed area. Sediment fences are to be used in preference to straw bales,
- Silt sausages or silt bags are to be placed across open drains and around drainage inlet pits, pipe head walls and kerb inlets to reduce flow velocities and capture sediment,
- Jute mesh fabric is to be pinned to steep slopes and steep slope drains to prevent erosion during heavy rain periods,
- A turf filter strip is to be laid and maintained along the down slope boundary, or adjacent to the kerb and gutter, to act as a final filter for any run-off leaving the property,
- Sediment traps are small dams designed to hold water and allow sediment to settle before discharge to waterways. Sediment traps are used where water flows have been concentrated, such as in drainage lines and gutters. They may be constructed from a range of materials including geo-textile, gravel, gabion or sandbags.

Standard ESCP example:

The below ESCP is extracted from the *Blue Book* and is an example of a standard ESCP. Examples of other erosion and sediment control plans and SWMPs are available in the *Blue Book*.



D4 Vegetation Management

About this part:

This DCP chapter facilitates the implementation of the MidCoast Vegetation Management Policy.

Applies to:

This DCP chapter applies to private land identified by the mapping referenced in the MidCoast Vegetation Management Policy.

Date adopted by Council:

28 July 2021

Effective date:

30 September 2021

Related Policy / Technical Manual:

Vegetation Management Policy

D4.1 Vegetation Management

Introduction

The MidCoast Vegetation Management Policy has been prepared pursuant to Part 3 of the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* (the SEPP). This DCP chapter facilitates the implementation of the MidCoast Vegetation Management Policy (the Policy).

The Policy and this DCP chapter help to achieve the aims of the SEPP to protect the biodiversity values and to preserve the amenity through the preservation of trees and vegetation.

Objective

The objective is to identify vegetation for protection for the purposes of the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* and to provide a trigger for assessment under the Vegetation Management Policy.

Controls

1. Removal or pruning of vegetation on land to which the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* applies, must comply with the process outlined in the Vegetation Management Policy.

Part E

Flooding Requirements



Greater Taree
CITY COUNCIL

PART E FLOODING REQUIREMENTS

Contents

E1	Floodplain management	3
E2	Introduction	5
E2.1	Why is floodplain management required?.....	5
E2.2	How do I use this part?	6
E2.3	Where does this part apply?.....	8
E2.3.1	Flood extents and flood planning level	8
E2.4	Initial subject assessment.....	9
E2.4.1	Determining what is potentially flood prone land .	10
E3	Submitting development applications.....	12
E3.1	How will applications be assessed?.....	13
E3.2	Land use categories	13
E4	Development controls	16
E4.1	Critical Uses and Facilities	17
E4.2	Sensitive Uses and Facilities.....	17
E4.3	Subdivision	19
E4.4	Residential.....	19
E4.5	Commercial and Industrial	21
E4.6	Tourist Related Development.....	23
E4.7	Recreation or Non-Urban Uses.....	25
E4.8	Concessional Development.....	26
E5	Other Development	28
E5.1	Dwellings in rural areas	28
E5.2	Ancillary structures in rural areas.....	28
E5.3	Replacement dwellings	29
E5.4	Earthworks and filling.....	29
E5.5	Fencing	30

E1 Floodplain management

About this part:

This part provides the detailed guidelines for development on flood prone land or potentially flood prone land.

Applies to:

All development within the former Greater Taree Local Government Area.

Date adopted by Council:

21 February 2017

Effective date:

6 March 2017

Related Policy / Technical Manual:

NSW Floodplain Development Manual 2005

Flood Study Assessment Requirements in Appendix G of this DCP

Adopted Flood Study and Floodplain Risk Management Plans:

Plan Title	Description of geographical area covered	Date Adopted
Wingham Peninsula Floodplain Risk Management Plan	Wingham Peninsula near the confluence of the Cedar Party Creek with the Manning River	December 2000. Revised FRMP adopted March 2011
North Wingham Floodplain Risk Management Plan	Cedar Party Creek to Comboyne Road	March 2011
Lansdowne Floodplain Risk Management Plan	Lansdowne Village and adjacent rural and semi rural areas	May 2015
Manning River Flood Study	Manning River floodplain - downstream of Wingham	November 2016

Table 1 - List of adopted Floodplain Risk Management Plans

Objectives

- Alert the community to the extent and degree of hazard of flood prone land for all potential floods, including floods greater than the 100 year average recurrence interval (ARI) flood and to ensure essential services and land uses are planned in recognition of all potential floods;
- Advise the community of the approach that Council will take in considering applications for building, development, subdivision and other planning proposals on land affected by flooding in the former Greater Taree Local Government Area;
- Ensure that acceptable standards of safety to life and property are applied when Council considers proposals for development on flood prone land;
- Ensure that development that is approved in flood prone areas is structurally capable of withstanding the effects of flowing floodwaters including debris and buoyancy forces;
- Ensure that development is not permitted in flood prone areas where that development would result in unnecessary risk to life of occupants or rescuers or in unwarranted public costs;
- Ensure that development on flood prone land does not adversely affect flood behaviour;
- Ensure, whenever possible, that buildings and services required for evacuation and emergency needs are sited above the PMF level;
- Apply a merit-based approach to all decisions relating to flood affected development that take account of social, economic and ecological as well as flooding issues.

E2 Introduction

E2.1 Why is floodplain management required?

State legislation

In 1984, the State Government introduced the Flood Prone Land Policy applicable to New South Wales. The First Floodplain Development Manual was published in 1986, with Council preparing an Interim Flood Management Policy 1987 in response to the State Policy and the first Floodplain Development Manual.

Revised guidelines were released in 2001 and were embodied in the Floodplain Management Manual 2001. The 2001 manual was never gazetted and was subsequently used as a guideline document by local government. This document was subsequently again reviewed in 2005 and resulted in the publication of the Floodplain Development Manual 2005 (the Manual). The Manual was gazetted on the 6 May 2005.

The Manual continues to support the NSW Government's Flood Prone Land Policy. The Primary objective of the policy is:

'to reduce the impact of flooding and flood liability on individual owners and occupiers of flood-prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods wherever possible.'

To achieve this objective, Council encourages a broad risk management hierarchy of:

- Avoidance of flood risk;
- Minimisation of flood risk using appropriate planning controls;
- Flood risk mitigation.

Avoidance and minimisation of flood risk are the options encouraged in all instances. This is managed primarily through land use planning and development control for implementation. Flood risk mitigation is the least preferred option, being reactive, costly and most likely to adversely affect the natural environment.

The flood plain management controls contained herein provide for a flexible merit based approach when dealing with planning, development and building matters on flood prone land, in order to support the principles of avoidance and minimisation whilst enabling appropriate development wherever suitable and practicable.

This approach is consistent with the State Government's Flood Prone Land Policy.

Floodplain Risk Management Plans (FRMP) provide modelled possible flood risk and behaviour, and may provide a strategy for the appropriate location of development, revised development controls, evacuation plans and community awareness information. FRMPs will continue to be prepared for various areas of the former Greater Taree Local Government Area. A list of the adopted FRMPs are shown in Table 1.

E2.2 How do I use this part?

The following is a summary of the major steps you should address:

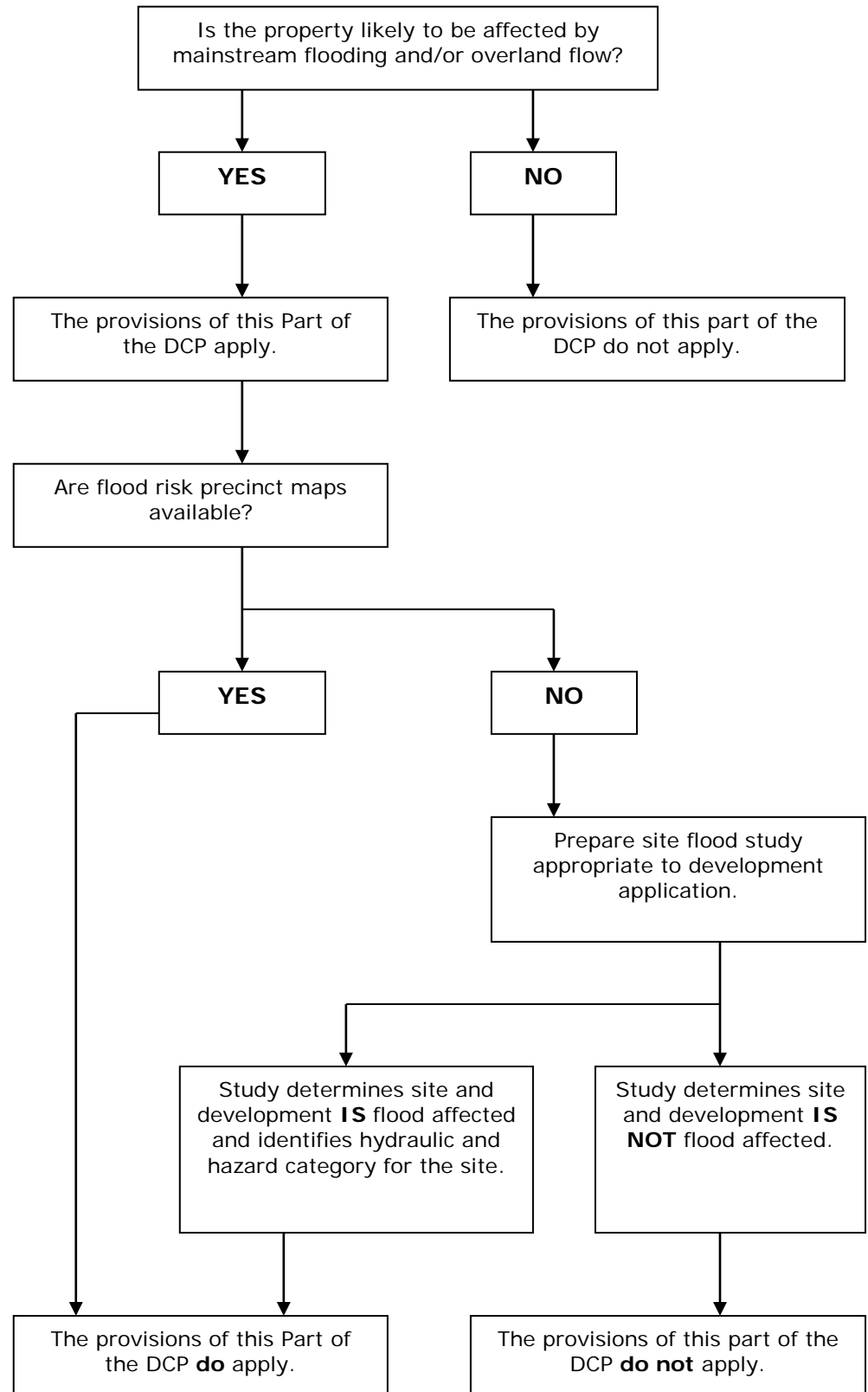
Applicants are to enquire with Council regarding existing **flood risk mapping**.

In areas outside those covered by Council's adopted flood studies, refer to **Appendix G** to determine if the subject site is potentially flood prone land.

1. Check the proposal is permissible in the zoning of the land by reference to any applicable Environmental Planning Instrument.
2. Consider any other relevant planning controls of Council (e.g. controls in any other part of this DCP which governs for instance the size and setback of development).
3. Determine the floodplain (e.g. Manning River etc.) and flood risk precinct (hazard and hydraulic category) within which your site is situated. Enquire with Council regarding existing flood risk mapping, Floodplain Risk Management Plans, or whether a site-specific assessment may be warranted in your case (for example, if local overland flooding is a potential problem or flood risk mapping has not been undertaken in your catchment). A property may be located in more than one Precinct and the assessment must consider the controls for each Precinct where relative to where located on the site. The following flow diagram summarises this consideration process.
4. Determine the land use category relevant to your development proposal, by firstly confirming how it is defined by the relevant environmental planning instrument and secondly by ascertaining the land use category from Table 3.
5. Assess and document how the proposal will achieve the performance criteria for development and associated parking and fencing provided by this part.
6. Check if the proposal will satisfy the prescriptive criteria for different land use categories in different flood risk precincts, as specified in the Development Control Schedules in this document.

The assistance of Council staff or an experienced floodplain engineer/consultant may be required at various steps in the process to ensure that the requirements of this part are fully and satisfactorily addressed.

How do I use this Part?



Applicants are to refer to Council's [online mapping](#) for identified flood prone land

E2.3 Where does this part apply?

This part applies to all land within the former Greater Taree Local Government Area affected by flooding and affected by or potentially affected by overland flow.

Controls normally apply where the development is on flood prone land, however there are instances, such as provision of safe access to flood affected areas for subdivisions, where even though the development is on flood free land, this Part still applies (known as evacuation constrained areas).

The extent of flood prone land is determined from flood studies. Council has adopted flood studies and associated mapping of flood prone land along the more intensively populated reaches of the Manning River and its tributaries.

In other areas which are yet to be mapped following flood studies, a proponent shall undertake a flood study where the proposed development is within potentially flood prone land as determined in Appendix G and this flood study shall be used to determine the extent of flood prone land and flood behaviour at the subject site.

E2.3.1 Flood extents and flood planning level

Council's [online mapping](#) indicates, as fully as possible given current available information, the extent of flood prone land (FPL3).

A range of flood planning levels (FPL) may apply depending on the type of land use and the part of the development in consideration. In principle, a higher FPL will apply to land uses considered more sensitive to flood hazards or which may be critical to emergency management operations or the recovery of the community after a flood event.

Different FPLs are also considered appropriate for different parts of development. For example, the non-habitable floor levels of a dwelling can be at a lower level relative to the habitable floor level.

The following table outlines the FPLs to be applied within the development controls outlined later in this section of the DCP.

Table 2 – Flood Planning Levels

Reference	Description
FPL1	5% AEP (20 Year ARI) flood level.
1% Flood Level	1% AEP (100 Year ARI) flood level. This level is useful for insurance purposes.
FPL2	2100 1% AEP (100 Year ARI) flood level.
FPL3	2100 1% AEP (100 Year ARI) flood level plus 0.5m Freeboard.
FPL4	Probable Maximum Flood (PMF) level.

Notes:

1. FPL1, FPL2 and FPL 4 have zero freeboard.
2. FPL3 is the height of the FPL2 (height of FPL2 needs to be obtained from Council) with a 0.5m freeboard.
3. The design flood levels and FPLs in Table 2 may be obtained from Council if available or otherwise will be required to be determined by the proponent in accordance with Appendix G. These levels will refer to Australian Height Datum (AHD).

FPL = Flood Planning Level (Flood planning levels selected for planning purposes derived from a combination of the adopted flood level as determined in floodplain management studies and incorporated in floodplain management plan)

AEP = Annual Exceedence Probability (The chance of a given or larger flood occurring in any one year)

ARI = Average Recurrence Interval (Long term average number of years between the occurrence of a particular flood event)

PMF = Probable Maximum Flood (The largest flood that could conceivably occur at a particular location).

E2.4 Initial subject assessment

Appendix G provides further information on **Flood Study Assessment Requirements.**

The extent of flood prone land is determined from flood studies. Council has adopted flood studies and associated mapping of flood prone land along the more intensively populated reaches of the rivers within the former Greater Taree Local Government Area.

In certain circumstances, and in relation to local overland flooding, definitive flood level data may not be available to enable determination of properties that should be covered by development controls. In such cases, as a first step, an initial subjective assessment should be made to determine the properties likely to be at risk. The methodology used to undertake this assessment should be documented and based upon historical information and reasonable assumptions given the catchment and channel size and terrain.

In areas outside those covered by Council's adopted flood studies, the proponent shall undertake the following process to determine if the subject site is potentially flood prone land, and if it is, undertake a Preliminary Flood Assessment to determine the extent of flood prone land at the subject site.

Local overland flooding

Overland flooding is a significant problem that needs to be considered along with mainstream flooding. Local overland flooding can be categorised as either local overland flows (typically including direct surface runoff, surcharges and overflows from low points in kerbs, or overflows from smaller pipes) or major drainage (typically involving the floodplains of original watercourses whether still natural or altered and/or may be associated with overflows from trunk drainage systems).

The principles of the Manual will be considered in the assessment of local overland flooding.

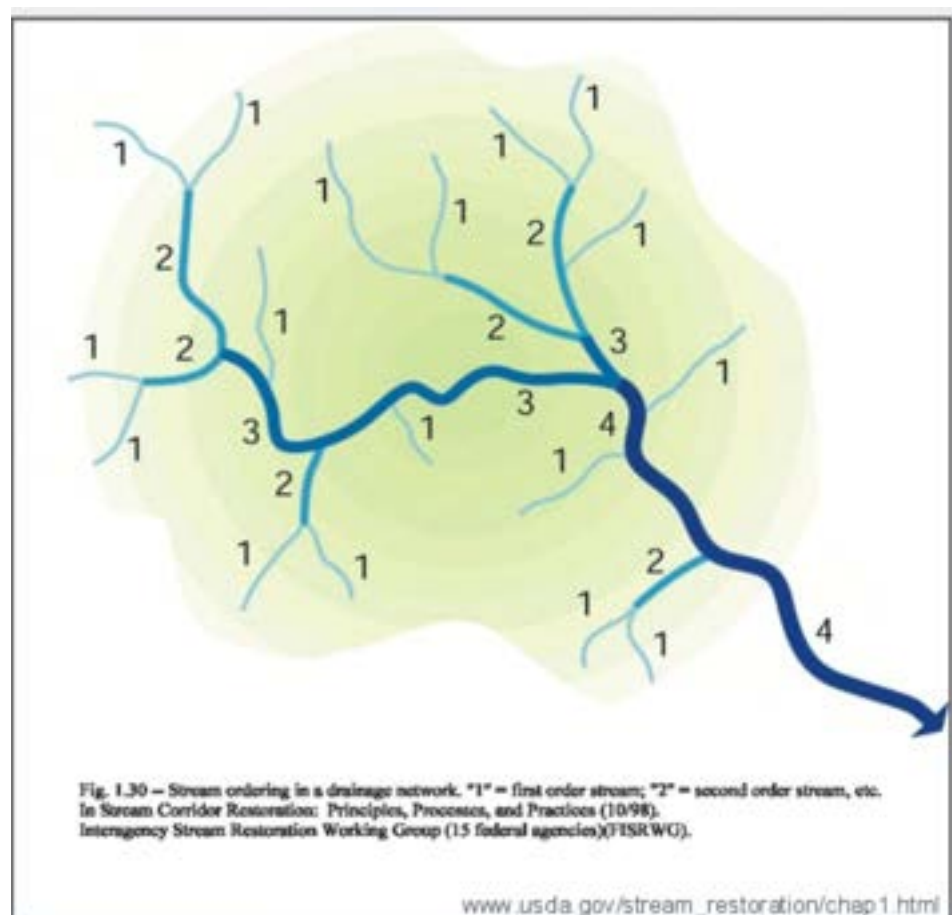
E2.4.1 Determining what is potentially flood prone land

In localities not covered by Council's adopted flood studies and associated mapping, land is considered to be potentially flood prone if:

- The subject land is adjacent to or under the influence of flood from any 3rd order or higher watercourse (refer below) and is either less than 20m above the normal water level of the watercourse (when measured perpendicular to the direction of flow), or less than 10m above the normal level of the watercourse where the catchment area is less than 100km²; or
- The subject land is less than 5.0m above any adjacent 1st or 2nd order watercourse.

The Strahler System of Ordering Watercourses

- Watercourses are shown on NSW Land and Property Information's topographic maps as broken or continuous blue lines.
- Starting at the top of a catchment, any watercourse which has no other watercourses flowing into it is classed as a 1st order watercourse (1).
- Where two 1st order watercourses join, the watercourse becomes a 2nd order watercourse (2).
- If a 2nd order is joined by a 1st order watercourse, it remains a 2nd order watercourse.
- When two or more 2nd order watercourses join, they form a 3rd order watercourse (3).
- A 3rd order watercourse does not become a 4th order watercourse until it is joined by another 3rd order watercourse, and so on as illustrated on the following diagram.



This Part does not apply if it can be shown that the subject site is not potentially flood prone.

If the above assessment (to be undertaken by a suitably qualified flooding engineer) determines that the subject site is potentially flood prone, a preliminary Flood Assessment as described in Appendix G shall be undertaken to determine if the site is flood prone.

E3 Submitting development applications

Performance criteria

1. The appropriate hydraulic category (floodway, flood storage, flood fringe), and hazard category (high/low) must be determined. A flood certificate containing this information may be obtained from Council. Alternatively, this information may be obtained from a suitably qualified person.
2. Applications must include information that addresses all relevant controls and the following matters as applicable.
3. Applications for concessional development (see Table 3) to an existing dwelling on flood prone land shall be accompanied by documentation from a registered surveyor confirming existing floor levels to AHD.
4. Development applications affected by this part shall be accompanied by a survey plan showing:
 - The position of the existing building(s) or proposed building(s);
 - The existing ground levels to AHD around the perimeter of the building and contours of the site; and
 - The existing or proposed floor levels to Australian Height Datum.
5. Applications for earthworks, filling of land and subdivision shall be accompanied by a survey plan with topographic levels to be an accuracy of 0.1m, structures and the like shall be to an accuracy of 0.01m, showing relative levels to Australian Height Datum.
6. For large scale developments, or developments in critical situations, particularly where an existing catchment based flood study is not available, a flood study using a fully dynamic one or two dimensional computer model and Floodplain Risk Management Plan may be required.
7. For smaller developments the existing flood study may be used if available and suitable (e.g. it contains sufficient detail), or otherwise, in other areas which are yet to be mapped following flood studies, a proponent shall undertake a flood study model where the proposed development is within potentially flood prone land as per the Initial Subjective Assessment identified in Part E2.4. The flood study shall be used to determine the extent of flood prone land and flood behaviour at the subject site (Where satisfactory to Council, verifiable anecdotal evidence may be used in support of an application for developments, e.g. rural dwellings).
8. Where the controls for a particular development proposal require an assessment of structural soundness during potential floods, the following impacts must be addressed:
 - Hydrostatic pressure;
 - Hydrodynamic pressure;
 - Impact of debris; and
 - Buoyancy forces.
9. Foundations need to be included in the structural analysis.

It should be noted that a private or site-specific flood plan for the proposed development is not an appropriate measure to rectify adverse impacts or to manage the consequences of inappropriate decisions.

E3.1 How will applications be assessed?

Applicants are to enquire with Council regarding existing **hydraulic status and flood hazard**.

In processing development applications the Council will apply the principles outlined in the Floodplain Development Manual, and the provisions of this policy.

This process will involve:

- Determination of land use category of the development (Table 3).
- Determination of the hydraulic status of the site (i.e. flood fringe, flood storage or floodway).
- Determination of the flood hazard (i.e. high or low).
- Assessment of the proposal in determining whether the development meets the controls outlined in Part E4 and is compatible, conditional or should be disallowed.

The hydraulic status and flood hazard will be determined by a flood assessment and/or the Engineering Department, having regard to the Floodplain Development Manual, information provided in the application and, where relevant, information provided by the relevant Government Departments and the State Emergency Services (SES) which has been incorporated in an adopted Local Floodplain Risk Management Plan.

E3.2 Land use categories

Eight major land use categories have been adopted. The specific uses which may be included in each category are listed in Table 3.

Table 3 Land use categories

Critical Use Facilities	Sensitive Uses and Facilities	Subdivision	Residential
<ul style="list-style-type: none"> - Community facilities which may provide an important contribution to the notification or evacuation of the community during flood events. - Emergency services. - Hospitals. 	<ul style="list-style-type: none"> - Assisted accommodation. - Educational establishments. - Hazardous or offensive storage establishment. - Correctional centre. - Liquid fuel depot. - Aged care housing. - Public utility undertakings or utility installations (including generating works) which are essential to evacuation during periods of flood or if affected would unreasonably affect the ability of the community to return to normal activities after flood events. - Telecommunication facilities. - Waste disposal facility. 	<ul style="list-style-type: none"> - Subdivision of land which involves the creation of new allotments, with potential for further development. 	<ul style="list-style-type: none"> - Backpackers accommodation. - Boarding houses. - Caravan park or camp grounds (long-term sites only). - Dual occupancy housing. - Dwelling. - Dwelling house. - Group homes. - Home industry. - Home business. - Public utility undertakings or utility installations (other than critical utilities). - Residential flat buildings. - Multi dwelling housing. - Habitable Rooms. - Non-Concessional Residential development being. (i) An addition or alteration to an existing dwelling of more than 10% or 30m² (whichever is the lesser) of the habitable floor area which existed at the date of commencement of this DCP. (ii) The construction of an outbuilding with a floor area > 20m².

Table 3 - (continued)

Land use categories

Commercial or Industrial	Tourist Related Development	Recreation or Non-urban Uses	Concessional Development
<ul style="list-style-type: none"> - Animal boarding or training establishment. - Bulky goods premises. - Business premises. - Car Parking. - Child care centre. - Entertainment facility. - Health consulting rooms. - Hotel. - Industry. - Kiosks. - Liquid fuel depot. - Medical centre. - Neighbourhood shops. - Motel. - Nightclub. - Offensive industry. - Offices. - Place of public worship. - Recreation facility. - Registered Club. - Restaurant. - Service Station. - Sex services premises. - Shop. - Transport depot. - Tourist information centre. - Vehicle body repair workshop. - Vehicle repair station. - Vehicle sales or hire premises. - Veterinary hospital. - Warehouse or distribution centre. - Waste disposal or management facility. - Non-Concessional other development. 	<ul style="list-style-type: none"> - Caravan park – short term sites only. - Tourist and visitor or accommodation or facility. 	<ul style="list-style-type: none"> - Agriculture. - Aquaculture. - Extractive industry. - Marina. - Recreation areas and minor ancillary structures (e.g. toilet blocks or kiosks). - Swimming enclosure. - Tennis court (private). - Rural Fire Sheds. - Dwellings on Agricultural Properties. - Sheds. 	<p>(a) In the case of residential development:</p> <p>(i) An addition or alteration to an existing dwelling of not more than 30m²</p> <p>(ii) The construction of an outbuilding with a maximum floor area of 20m²; or</p> <p>(b) In the case of other development:</p> <p>(i) An addition to existing premises of not more than 10% of the floor area which existed at the date of commencement of this DCP.</p> <p>(ii) A change of use which does not increase flood risk having regard to property damage and personal safety.</p>

E4 Development controls

Explanation

The type and stringency of controls have been graded relative to the severity and frequency of potential floods, having regard to Table 3 - Land Use Categories.

Objectives

- Ensure the proponents of development and the community in general are fully aware of the potential flood hazard and consequent risk associated with the use and development of land within the floodplain;
- Require developments with high sensitivity to flood hazard (e.g. critical public utilities) to be sited and designed such that they are subject to no or minimal risk from flooding, up to and including the PMF, and have reliable access;
- Allow development with a lower sensitivity to the flood hazard to be located within the floodplain, subject to appropriate design and siting controls, provided that the potential consequences that could still arise from flooding remain acceptable having regard to the State Government's Flood Policy and the likely expectations of the community in general;
- Ensure appropriate development types are compatible with the Floodplain Development Manual Guidelines in highly sensitive and/or high hazard classified areas;
- Prevent any intensification of the use of floodways, flood storage areas or high hazard areas and wherever appropriate and possible, allow for their conversion to natural waterway corridors;
- Ensure that design and siting controls required to address the flood hazard do not result in unreasonable impacts upon the amenity or ecology of an area;
- Minimise the risk to life by ensuring the provision of appropriate access from areas affected by flooding up to extreme events;
- Minimise the damage to property, including motor vehicles, arising from flooding;
- Ensure that proposed development does not expose existing development to increased risks associated with flooding.

Key terms

Habitable room in a residential situation is a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom. In an industrial or commercial situation it is an area used for offices or to store valuable possessions susceptible to flood damage.

Reliable access/egress means the ability for people to safely evacuate an area subject to imminent flooding within effective warning time having regard to the depth and velocity of flood waters and the suitability of evacuation route.

Performance criteria

General

1. The relevant environmental planning instruments (generally the Local Environmental Plan) identify development permissible with consent in various zones in the LGA. Notwithstanding, constraints specific to individual sites may preclude Council granting consent for certain forms of development on all or part of a site.
2. Filling of the site, where acceptable to Council, may change the hydraulic and hazard classification considered to determine the controls applied in the circumstances of individual applications.
3. The proposed development should not result in any increased risk to human life.
4. The proposal should only be permitted where effective warning time and reliable access is available for evacuation from an area potentially affected by floods to an area free of risk from flooding. Evacuation should be consistent with any relevant flood evacuation strategy where in existence.
5. Development should not detrimentally increase the potential flood effects on other development or properties either individually or in combination with the cumulative impact of development that is likely to occur in the same floodplain.
6. Motor vehicles must be able to be relocated, to an area with substantially less risk from flooding, within effective warning time.
7. Procedures would be in place, if necessary, (such as warning systems, signage or evacuation drills) so that people are aware of the need to evacuate and relocate motor vehicles during a flood and are capable of identifying the appropriate evacuation route.
8. Refer to Part E4.8 of this part for concessional development, such as for house raising proposals.

E4.1 Critical Uses and Facilities

Critical uses and facilities are unsuitable on any part of flood prone land affected by flooding up to FPL4.

E4.2 Sensitive Uses and Facilities

Hydraulic/Hazard Category

- No development is to occur in or over a floodway or flood storage area, or a high hazard area, generated by flooding up to FPL4.

Floor Levels

- Habitable floor levels to be no lower than FPL4.
- Non-habitable floor levels to be no lower than FPL3 unless justified by a site specific assessment.

Building Components and Method

- All structures to have flood compatible building components below FPL4.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL4. An engineer's report will be required.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- The minimum surface level of open car parking spaces or carports shall be as high as practical, and not below FPL1.
- Garages or enclosed car parking must be protected from inundation by flood waters up to FPL2.
- Where 20 or more vehicles are potentially at risk, protection shall be provided to FPL3.
- Where the level of the driveway providing access between the road and parking space is lower than 0.3m below FPL2, the following condition must be satisfied - when the flood levels reach FPL2, the depth of inundation on the driveway shall not exceed:
 - The depth at the road; or
 - The depth at the car parking space.

Evacuation

- Reliable access for pedestrians or vehicles is required from the building, commencing at a minimum level equal to the lowest habitable floor level to a refuge area above FPL4. In the case of alterations or additions to an existing development, this may require retro-fitting the existing structures if required to support a refuge area above FPL4.
- Adequate Flood Warning Systems, Signage and Exits are to be made available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL4.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL4.

E4.3 Subdivision

Hydraulic Hazard Category

- No subdivision is to occur on land wholly inundated by flooding up to FPL2 event, unless it is demonstrated that the risk of flooding can be effectively and appropriately mitigated without impacting the adjacent floodplain.
- Subdivision proposed in residential zones where partly inundated by flooding up to FPL2 may be considered where it can be demonstrated that all resultant lots are able to provide adequate flood free land suitable for future development and effluent disposal (if applicable) Mounds are not considered suitable for this type of subdivision.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

E4.4 Residential

For additional specific controls for dwellings in rural areas see Part E5.1

Hydraulic Hazard Category

- No development is to occur in or over a floodway area, or a high hazard area, generated by flooding up to FPL2, unless justified by a site specific assessment.

Floor Levels

- Non-habitable floor levels are to be equal to or greater than FPL3 where possible, or otherwise no lower than FPL1 unless justified by a site specific assessment.
- Habitable floor levels are to be no lower than FPL3. In circumstances where construction of a building at FPL3 is likely to have an adverse impact on the adjoining property or the visual amenity of the location, a variation may be sought.
- Where the lowest habitable floor area is elevated more than 1.5m above finished ground level, a restriction is to be placed on the title of the land, pursuant to Section 88B of the Conveyancing Act, confirming that the undercover area is not to be enclosed.

Building Components and Method

- All structures to have flood compatible building components below FPL3.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.

Where adverse impacts on adjoining properties are likely, variations may be sought to reduce floor levels no lower than the 1% AEP flood level plus 0.5m freeboard.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- The minimum surface level of open car parking spaces or carports shall be as high as practical, and not below FPL1.
- Garages or enclosed car parking must be protected from inundation by flood waters up to FPL2.
- Where the level of the driveway providing access between the road and parking space is lower than 0.3m below FPL2, the following condition must be satisfied - when the flood levels reach FPL2, the depth of inundation on the driveway shall not exceed:
 - The depth at the road; or
 - The depth at the car parking space.

Evacuation

- A Site Flood Emergency Response Plan is required when elements of the development, including vehicular and pedestrian access are below FPL3. The Site Flood Emergency Response Plan should relate to the landuse and site conditions in conjunction with flood behaviour up to FPL2 expected to be experienced at the site. The plan should consider the following specific actions:
 - Preparing for a flood;
 - Responding when a flood is likely;
 - Responding during a flood; and
 - Recovery after a flood.

The flood plan should be consistent with the relevant *NSW SES FloodSafe Guide*.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL3.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL3.

E4.5 Commercial and Industrial

Hydraulic Hazard Category

- No development is to occur in or over a floodway area, or a high hazard area, generated by flooding up to FPL2, unless justified by a site specific assessment.

Where adverse impacts on adjoining properties are likely, variations may be sought to reduce floor levels no lower than the 1% AEP flood level plus 0.5m freeboard.

Floor Levels

- Non-habitable floor levels are to be equal to or greater than FPL3 where possible, or otherwise no lower than FPL1 unless justified by a site specific assessment.
- Habitable floor levels are to be no lower than FPL3. In circumstances where construction of a building at FPL3 is likely to have an adverse impact on the adjoining property or the visual amenity of the location, a variation may be sought.
- Where the lowest habitable floor area is elevated more than 1.5m above finished ground level a restriction is to be placed on the title of the land, pursuant to Section 88B of the Conveyancing Act, confirming that the undercover area is not to be enclosed.

Building Components and Method

- All structures to have flood compatible building components below FPL3.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- The minimum surface level of open car parking spaces or carports shall be as high as practical, and not below FPL1.
- Garages or enclosed car parking must be protected from inundation by flood waters up to FPL2.
- Where 20 or more vehicles are potentially at risk, protection shall be provided to FPL3.
- Where the level of the driveway providing access between the road and parking space is lower than 0.3m below FPL2, the following condition must be satisfied - when the flood levels reach FPL2, the depth of inundation on the driveway shall not exceed:
 - The depth at the road; or
 - The depth at the car parking space.

Evacuation

- A Site Flood Emergency Response Plan is required when elements of the development, including vehicular and pedestrian access are below FPL3. The Site Flood Emergency Response Plan should relate to the landuse and site conditions in conjunction with flood behaviour up to FPL2 expected to be experienced at the site. The plan should consider the following specific actions:
 - Preparing for a flood;
 - Responding when a flood is likely;
 - Responding during a flood; and
 - Recovery after a flood.

The flood plan should be consistent with the relevant NSW SES FloodSafe Guide.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL3.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL3.

E4.6 Tourist Related Development

Where adverse impacts on adjoining properties are likely, variations may be sought to reduce floor levels no lower than the 1% AEP flood level plus 0.5m freeboard.

Hydraulic Hazard Category

- No development is to occur in or over a floodway area, or a high hazard area, generated by flooding up to FPL2, unless justified by a site specific assessment.

Floor Levels

- Habitable floor levels are to be no lower than FPL3. In circumstances where construction of a building at FPL3 is likely to have an adverse impact on the adjoining property or the visual amenity of the location, a variation may be sought.

Building Components and Method

- All structures are to have flood compatible building components below FPL3.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- The minimum surface level of open car parking spaces or carports shall be as high as practical, and not below FPL1.
- Garages or enclosed car parking must be protected from inundation by flood waters up to FPL2.
- Where the level of the driveway providing access between the road and parking space is lower than 0.3m below FPL2, the following condition must be satisfied - when the flood levels reach FPL2, the depth of inundation on the driveway shall not exceed:
 - The depth at the road; or
 - The depth at the car parking space.

Evacuation

- A Site Flood Emergency Response Plan is required when elements of the development, including vehicular and pedestrian access are below FPL3. The Site Flood Emergency Response Plan should relate to the landuse and site conditions in conjunction with flood behaviour up to FPL2 expected to be experienced at the site. The plan should consider the following specific actions:
 - Preparing for a flood;
 - Responding when a flood is likely;
 - Responding during a flood; and
 - Recovery after a flood.

The flood plan should be consistent with the relevant *NSW SES FloodSafe Guide*.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL3.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL3.

E4.7 Recreation or Non-Urban Uses

Hydraulic Hazard Category

- No development is to occur in or over a floodway area, or a high hazard area, generated by flooding up to FPL2, unless justified by a site specific assessment.

Floor Levels

- All floor levels to be no lower than FPL1.

Building Components and Method

- All structures to have flood compatible building components below FPL3.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- The minimum surface level of open car parking spaces, carports or garages, shall be as high as practical.
- The driveway providing access between the road and parking space shall be as high as practical and generally rising in the egress direction.

Evacuation

- A Site Flood Emergency Response Plan is required when elements of the development, including vehicular and pedestrian access are below FPL3. The Site Flood Emergency Response Plan should relate to the landuse and site conditions in conjunction with flood behaviour up to FPL4 expected to be experienced at the site. The plan should consider the following specific actions:
 - Preparing for a flood;
 - Responding when a flood is likely;
 - Responding during a flood; and
 - Recovery after a flood.

The flood plan should be consistent with the relevant *NSW SES FloodSafe Guide*.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL3.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL3.

E4.8 Concessional Development

Hydraulic Hazard Category

- No development is to occur in or over a floodway area, or a high hazard area, generated by flooding up to FPL2, unless justified by a site specific assessment.

Floor Levels

- Habitable floor level to be no lower than FPL3. Where this is not practical due to compatibility with the height of adjacent buildings, or compatibility with the floor level of existing buildings, or the need for access for persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical, and, when undertaking alterations or additions no lower than the existing floor level.
- Non-habitable floor levels to be equal to or greater than FPL3 where possible, or otherwise no lower than FPL1 unless justified by a site specific assessment.
- A restriction is to be placed on the title of the land, pursuant to Section 88B of the Conveyancing Act, where the lowest habitable floor area is elevated more than 1.5m above finished ground level, confirming that the undercover area is not to be enclosed.

Building Components and Method

- All structures to have flood compatible building components below FPL3.

Structural Soundness

- Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report may be required.

Flood Effects

- Engineer's report required to certify that the development will not increase flood effects elsewhere, having regard to:
 - Loss of flood storage.
 - Changes in flood levels, flows and velocities caused by alterations to the flood conveyance.
 - The cumulative impact of multiple potential developments in the floodplain.

Car Parking and Driveway Access

- Driveway and parking space levels to be no lower than the design floor level or ground level. Where this is not practical, a lower level may be considered. In these circumstances, the level is to be as high as practical, and, when undertaking alterations or additions no lower than the existing level.

Evacuation

- A Site Flood Emergency Response Plan is required when elements of the development, including vehicular and pedestrian access are below FPL3. The Site Flood Emergency Response Plan should relate to the landuse and site conditions in conjunction with flood behaviour up to FPL2 expected to be experienced at the site. The plan should consider the following specific actions:
 - Preparing for a flood;
 - Responding when a flood is likely;
 - Responding during a flood; and
 - Recovery after a flood.

The flood plan should be consistent with the relevant *NSW SES FloodSafe Guide*.

Management and Design

- Applicant to demonstrate that area is available to store goods above FPL3.
- Materials which may cause pollution or are potentially hazardous during any flood must not be stored externally below FPL3.

E5 Other Development

E5.1 Dwellings in rural areas

This section is to be read in conjunction with Part E4.4

Objectives

- To ensure that new dwellings approved in the floodplain in rural agricultural and large lot residential are structurally sound for relevant flood conditions;
- To ensure that the dwelling, the residents, farm equipment and stock are protected during floods.

Development Controls

Development not on a mound

1. Dwellings must be certified structurally sound and constructed on certified structural footings to resist the forces of flood. These forces include the impact of standing water on foundations, flowing water, debris loading and buoyancy.
2. Suitable provision for the storage of farm equipment and stock as required in the event of a flood occurrence.
3. The habitable floor level is to be no lower than FPL3.

Development on a mound.

1. If the dwelling house is to be constructed on a certified mound, the mound is to be constructed at the site of the proposed dwelling and extend a minimum three (3) metres beyond the dwelling. This extra width provides for the storage of vehicles, farm equipment and some stock during a flood.
2. The mound is to be designed by an engineer who is to certify that the mound will be stable during flood conditions, will withstand the forces of flowing and standing water up to FPL2, as well as debris loading and buoyancy forces.
3. The level of the mound is to be 300mm above FPL2, and the floor level of the dwelling is to be no lower than FPL3.

E5.2 Ancillary structures in rural areas

Objectives

- To ensure that ancillary structures approved in the floodplain in rural agricultural and large lot residential are structurally sound for relevant flood conditions.

Development Controls

1. Non-habitable structures with the purpose of storing vehicles must comply with the Development Controls in Part E4 for Floor Levels and Access.
2. Storage sheds may be considered at a floor level below FPL1 with appropriate justification.

Applicants are to enquire with Council regarding existing **hydraulic status and flood hazard**.

Applicants are to enquire with Council regarding any proposed amenities. Floor levels may be affected.

3. Other ancillary structures below appropriate FPL's may be considered with appropriate justification.
4. All structures below FPL3 will require flood compatible building components and the applicant to demonstrate that the new structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.

E5.3 Replacement dwellings

Objectives

- To ensure that replacement dwellings approved in the floodplain are structurally sound for relevant flood conditions;
- To ensure that the dwelling, residents and emergency services personnel are not placed at unacceptable risk during floods.

Development Controls

1. Replacement of an existing dwelling in a flood prone area, irrespective of the hydraulic category, will be assessed as a new dwelling. Habitable floor levels to be no lower than FPL3.
2. All structures below FPL3 will require flood compatible building components and the applicant to demonstrate that the new structure can withstand the forces of floodwater, debris and buoyancy up to and including FPL3. An engineer's report must be provided.
3. Concession may be considered in regard to Car Parking and Driveway Access with appropriate justification.

E5.4 Earthworks and filling

Objectives

- To ensure that proposed filling does not exacerbate flooding on other properties.

Development Controls

1. Filling on flood controlled land is not permitted unless a report from a suitably qualified engineer is submitted to Council that certifies that the development will not increase flood affectation elsewhere.
2. Filling of floodway areas is not permitted.
3. Filling of individual sites in isolation, without consideration of the cumulative effects is not permitted. A case by case decision making approach cannot take into account the cumulative impact of flooding behaviour, and associated risks, caused by individual developments. Any proposal to fill a site must be accompanied by an analysis of the effect on flood levels of similar filling of developable sites in the area.
4. This analysis would form part of a flood study prepared in accordance with Council's requirements as outlined in Appendix G of the DCP.

E5.5 Fencing

Objectives

- To ensure that fencing does not result in the undesirable obstruction of the free flow of floodwaters;
- To ensure that fencing does not become unsafe during floods and potentially becomes moving debris which threatens the integrity of structures or the safety of people.

Development Controls

1. Fencing within a floodway or high hazard flood risk area will not be permissible except for security / permeable / open type / safety fences of a type approved by Council.
2. Council will require a development application for all new solid (non-porous) and continuous fences above 0.6m high, in the high hazard flood risk areas.

Part F

Heritage Requirements



Greater Taree
CITY COUNCIL

PART F HERITAGE REQUIREMENTS

Contents

F1. Heritage introduction	3
F1.1 What is heritage and why is it important?.....	3
F1.1.1 Heritage significance and management	4
F1.2 Heritage conservation.....	6
F1.2.1 General conservation guidelines	6
F1.2.2 Maintaining Buildings	8
F1.2.3 Conserving building elements.....	10
F1.3 Heritage consent requirements	14
F1.3.1 Development not requiring consent.....	14
F1.3.2 Development requiring consent	15
F1.3.3 Demolition.....	15
F1.3.4 Change of use	16
F2. Development requirements.....	17
F2.1 Site requirements	18
F2.1.1 Siting and setbacks.....	18
F2.1.2 Gardens and garden elements.....	21
F2.2 Building requirements.....	22
F2.2.1 Design and character	22
F2.2.2 Scale and form.....	24
F2.2.3 Roof forms and Chimneys.....	26
F2.2.4 Detailing.....	27
F2.2.5 Building elements, materials, finishes and colour schemes	28
F2.2.6 Timber Buildings.....	30
F3. Ancillary development requirements	31
F3.1 Carports and garages	31
F3.2 Fencing.....	33
F3.3 Services and new technologies.....	35

F1. Heritage introduction

About this part:

This part provides the detailed guidelines for development of an archaeological site, heritage item or within a heritage conservation area.

Applies to:

All archaeological sites, heritage items and heritage conservation areas within the Greater Taree Local Government Area.

Date adopted by Council:

14 October 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

Greater Taree Heritage Study 1990

F1.1 What is heritage and why is it important?

Our heritage helps to tell the story of our past and can include public buildings, private houses, housing estates, archaeological sites, industrial complexes, cemeteries, memorials and landscapes. These physical reminders are valued because they are associated with phases of history, or important people or events. They inform us about our cultural history, connect us with our past, and give the community a sense of identity.

Conserving our heritage is important for protecting the individual character and values that are represented in archaeological sites, heritage items and heritage conservation areas, and assists us in understanding our past.

This DCP applies to all archaeological sites, heritage items and heritage conservation areas (including properties, buildings and landscapes) identified in the Greater Taree City Council Local Environmental Plan 2010.

Objectives

- To implement the heritage conservation provisions in the Greater Taree Local Environmental Plan 2010;
- To conserve and retain the heritage significance of archaeological sites, heritage items and heritage conservation areas;
- Ensure that new development is compatible with the significance of heritage conservation areas, archaeological site and heritage items.

F1.1.1 Heritage significance and management

These heritage provisions aim to protect and enhance archaeological sites, heritage items and heritage conservation areas, while providing flexibility for owners to adapt properties to meet their changing needs. Heritage protection does not aim to freeze development in time. The right to upgrade older homes to modern standards is recognised. It is a matter of ensuring that what is proposed is sensitive and appropriate.

For most buildings in heritage conservation areas, requirements affect visual features only. For less significant buildings there is greater design freedom, subject to basic principles affecting neighbours and streetscape impacts; such as scale, form, siting, setbacks, colours and materials. This is generally limited to what people see from the street, or other public places and rarely prevents the refurbishment of interiors or carrying out alterations to the rear or single level additions.

Smaller allotments and those with close proximity to neighbours do impose greater limitations and would be as required for any new development.

Keeping heritage places enables the community to experience again and again the pleasures and interest they offer. Once lost, they are gone forever. No record or photograph can ever substitute for an actual place.

Heritage properties, items, buildings and landscapes in Greater Taree fall into one or more of the following categories:

- National Heritage and Commonwealth Heritage
- State Heritage
- Local Heritage

The Greater Taree Local Environmental Plan identifies the significance of items under these above categories. The Federal and State governments require a separate assessment process for their items and would need to be contacted directly if considering any development of those listed sites.

Applications involving local heritage sites are assessed by Council. The three types of local heritage places are:

- Archaeological sites – generally ruins or locations of heritage significance, for example wharf, boat or church remains. The site and any remains are the location of a locally significant part of Taree's history.
- Heritage items – places with heritage significance including items of historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value. These items contribute to the individuality, streetscape, townscape, landscape or natural character of an area and are irreplaceable parts of its environmental heritage.
- Heritage conservation areas - are more than a collection of individual heritage items, more than a place which looks good because of its design, its neighbourhood amenity, or because of the individual buildings in it. Conservation areas have a sense of place, or a spirit of place, which is hard to define, and also hard to replace.

The heritage values of each **conservation area** can be found on council's website: www.gtcc.nsw.gov.au

This is because their character reflects not just the buildings in them, but also the reasons for the buildings, the changing social and economic conditions over time, and the physical responses to those changes.

The conservation areas of Greater Taree each have their own unique characteristics. The collective existence of buildings, individual heritage items, trees, open spaces, views and landmarks, and smaller details such as sandstone kerb and gutters all contribute to our appreciation of the area's historic value.

When assessing development in conservation areas there are two types of buildings which are explained below. Assistance can be provided by Council's Heritage Advisor as to which applies to a site.

Council's Heritage Advisor and Development Planners can also assist residents and applicants in clarifying whether the building is contributory or non-contributory.

- **Contributory buildings** - provides good evidence of the main development period(s) of the area, and makes a positive contribution to the character and/or heritage significance of the conservation area. They have a collective significance and their retention is essential if the character of the area is to be retained. While contributory buildings should be retained, they can be altered as long as the character of the building or of the area is not adversely affected.
- **Non-contributory buildings** – generally displays qualities which do not add to the character of the conservation area. They are not to be considered as a precedent for new work when assessing the merit of an application. These non contributory buildings may be demolished, after a careful assessment is made, and replaced by new development sympathetic to the heritage conservation area.

This DCP provides provisions to be considered when assessing the development of places of heritage significance. These provisions are based on the principles contained in the Australia ICOMOS *Charter for the Conservation of Places of Cultural Significance* (the *Burra Charter*).

F1.2 Heritage conservation

F1.2.1 General conservation guidelines

The following guidelines apply to projects that involve work to conserve an existing historic building or place. Historic places may range from listed heritage items to buildings in a conservation area.

Getting Started/Research

A key principle in heritage conservation is the need to understand the heritage importance or significance of a place before making decisions about how to manage it. Understand what makes a place special; why it was built, how it was used and how it has changed.

Documentary research can reveal useful information including old photographs and early records such as title deeds to indicate successive owners. Other types of documentary research might involve searching collections of libraries, museums, sourcing maps and plans, photographic and picture collections or books and articles.

This information can be found at the Lands Titles Office, libraries – including Taree Library and the Mitchell Library in Sydney, Local Council records, local museums and possibly galleries. Former owners of the building may also be of assistance. Establishing the construction date of early buildings is difficult, as there is often little documentary evidence. It is usually necessary, therefore, to rely on observation of the building style, and research of land titles in the Land Titles Office, which provide a sequence of owner names and dealings.

Getting to know the Building

A close examination of the fabric will usually be very important. The fabric of a building or place refers to the physical material of which it is comprised. Careful inspection can reveal evidence of original detailing. Painting might reveal the shape of a former iron roof over a verandah; nail holes on verandah posts might show the former location of brackets.

Systematic inspection of the fabric, informed by knowledge of the history of the place, will help to understand its significance. A conservation specialist may be required to evaluate whether the building is significant and to identify the most significant elements. Looking at other similar buildings in the locality can also indicate how missing parts of a building may have appeared, or how things were done.

When you have determined what is significant about a place, this information should help to guide maintenance, repair and conservation work. Wherever possible, original features, materials and finishes should be retained.

Sound Advice

It is advisable, and often necessary to obtain professional advice from experienced people such as heritage architects when working on a major project. Where there is considerable expenditure involved, it is important not to rely on guesswork, which may lead to problems later on.

The NSW Heritage Office maintains a list of consultants who specialise in heritage work, which can be obtained from Council. Council also has a free Heritage Advisory service to assist you with preliminary advice on your project.

Keeping Records

When working on conserving or altering a place, it is important to make careful records of the state of the place before it is changed. This will provide an accurate reference to how the repaired or new material should be constructed and/or appear. It will also provide good reference material for people who will look after the place in the future.

Conservation Processes

Work on an historic building or place can involve a variety of Conservation processes as defined by the Burra Charter.

The Burra Charter establishes the nationally accepted standard for the conservation of places of cultural significance. The Charter advocates a cautionary approach to changing a place, doing as much work as necessary to repair, secure and to make it function, but as little as possible – so the history of the place can continue to be recognised in its physical presence.

Burra Charter definitions of common conservation processes:

Restoration means returning the existing fabric of a place to a known earlier state by removing, adding on or re-assembling existing components without the introduction of new material.

Reconstruction involves introducing material to replace missing elements returning a place as nearly as possible to a known earlier state. Complete rebuilding on the same or another site is unacceptable except as an absolute last resort.

Adaptation means modifying a place to suit the existing use or proposed compatible uses. A compatible use means a use that involves no change to the culturally significant fabric, or changes that require minimal impact.

Adaptation is acceptable where the conservation of the place cannot otherwise be achieved, and where the adaptation does not substantially detract from its cultural significance.

Preservation means maintaining the fabric of a place in its existing state and preventing deterioration.

Maintenance means the continuous protective care of the fabric and the setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.

Relocation. A building or work should remain in its historical location. Moving a part or all of a building is unacceptable unless this is the sole means of ensuring its survival.

Changes which remove building fabric or introduce new fabric should as far as possible be reversible in order that the earlier appearance may be recovered at a later date.

F1.2.2 Maintaining Buildings

Old buildings benefit from routine maintenance. It should be remembered, however that old buildings have unique characteristics, and it is generally undesirable and sometimes very damaging to try and reverse the effects of age on materials.

While property owners can undertake some maintenance, some types of work such as addressing damp problems or the repointing of masonry requires the expertise of trades people experienced in conservation work.

Maintenance is one of the most important parts of conservation work. Maintenance should be a regular part of any property management. This means that problems such as water penetration, termite infestation, or vandalism do not get out of hand requiring substantial costs to repair.

Repairing and Maintaining Roofs

Roofs may contain a number of different elements including sheeting or covering chimneys, cappings, roof vents, eaves, pediments, guttering, bargeboards and fascia boards.

1. Original roof material should be repaired rather than replaced wherever possible. However if it is necessary to replace it, materials should generally match in type, size, shape, colour and texture.
2. Original chimneys, original cornices, eaves details, brackets and pediments should be preserved as an important part of the composition of older buildings.
3. When repairing or replacing corrugated iron roofing, small details should be retained or matched to the original. Such details include cutting of ridge and hip cappings to match the iron flutes, which also make the roof more weatherproof.
4. Traditional stepped flashings, roof vents, gutter moulds, and rainwater heads should be preserved and restored wherever possible during re-roofing.
5. Appropriate profiles for new guttering are important, such as ogee, half-round or quad styles.
6. Round downpipes common until the early twentieth century should be used where appropriate.
7. The retention of existing slate roofs will generally be required as this roof type is now rare in the area and complete replacement is likely to be very expensive. The repair of slate roofs will often require skilled trade's people.

Repairing and Maintaining Rendered Walls

1. Render or stucco was often applied to external walls to protect them from the elements. This type of surface should not be removed, as softer porous bricks underneath the render will quickly deteriorate without their protective barrier.
2. External render was usually lime based, and was therefore absorbent. Modern strong cement renders, however can cause dramatic decay.

3. Once in the wall, moisture becomes trapped and underlying soft brick and stone can severely breakdown. Cracked or damaged traditional render should be repaired with a similar compatible render, not cemented and painted over.

Repairing and Maintaining Face Brick or Stonework

1. Face brick or stone should not be painted over. Buildings with this treatment were designed specifically, often using brick patterns, or tuck-pointing.
2. Paint systems also tend to prevent the evaporation of moisture from the surface. Unless moisture can evaporate from the inside of the wall surface, the moisture content of the wall will increase.
3. In hot weather moisture behind the paint film will increase, and cause blistering. As the surface layer of paint begins to break down, further water penetration can lead to increased dampness.

Repairing and Maintaining Timber Buildings

Timber buildings are some of the most characteristic features of the rural landscape. Shearing sheds, barns, woolsheds, stables and worksheds built by settlers and farmers in the 19th and early 20th century are a unique part of our heritage.

Timber buildings are under threat from various causes. Termites are a major problem. Attacks by insects such as borers also contribute to deterioration. Simple structures were often built with footings directly in the ground, making rot another serious problem. Environmental factors such as rain, wind and ultraviolet radiation cause further damage. There are simple solutions that can prolong the life of these buildings.

Strategies include:

1. selective splicing of new beams to timber posts where they've failed and are structurally important;
2. wire bracing to keep buildings square and to prevent further lean;
3. wiring loose elements in place when fragile.

The philosophy behind the approach is to retain as much original fabric as possible and therefore keep the evidence of the building's history and significance with the minimum amount of intervention.

External Cleaning and Paint Removal

1. Cleaning paint from stone or brick should not be undertaken without expert advice.
2. Sandblasting or abrasive cleaning of masonry may remove the outer masonry surface and increase deterioration of the exposed surface.
3. This can ruin the appearance and de-value the building. Other less severe methods of cleaning can be utilised that do not damage the substrate.

Waterproof Stone and Brick Coatings

1. The application of waterproof coatings or varnishes should be avoided as they can accelerate the deterioration of the masonry by trapping moisture. Damage can occur when water cannot escape and layers of salt build up below the surface.
2. Often the best solution for water penetration is repointing.

Mortar and Repointing

1. Repointing of masonry is often a key part of conservation work. It is very important to ensure that repointing is carried out properly using appropriate materials and techniques.
2. Mortar was originally intended to encourage the evaporation of moisture from the joints rather than the masonry units. A soft lime mortar with a rough texture and lower strength than the surrounding masonry should be used for pointing work.
3. Grey Portland cement should not be used in buildings where lime mortars are present. This is particularly important in old buildings where no damp proof course exists.
4. Grey Portland cement is invariably stronger and of a different absorbency level from the brick or stonework. This causes evaporation to occur in the stone or brick more easily than the replaced mortar joint. Deterioration and cracking of masonry may therefore occur quickly after repointing in hard cement.

Rising and Falling Damp

1. Some masonry buildings suffer from rising and/or falling damp. It can cause crumbling of exterior masonry, staining of internal finishes, and cause musty smells in poorly ventilated rooms.
2. Rising damp can have a number of simple or complex causes. Gutters and drains or sprinklers may be soaking and pooling on ground near a wall, concrete floors might be forcing water up a wall.
3. Before deciding how to fix the problem a number of alternatives may be suitable including: improved sub – floor ventilation, eliminating the water source and improving site drainage, or as a last resort inserting a damp proof course for severe cases.
4. Specialist advice is recommended to avoid large financial outlays, which may not fix the problem.

F1.2.3 Conserving building elements

Getting the Details Right

1. When a building is designed, there is generally a consistent approach to details such as window frames, sills, skirting boards, verandah posts and brackets. These existing original features should be retained and maintained.
2. New work or repair of the existing details should be in keeping with the original design. The imitation of something from another place such as introducing aluminum lace or shutters is not appropriate as it can detract from the appearance and authenticity of the property.

3. Missing components such as verandah brackets, fences, and chimneys should be copied carefully and reinstated in their original style.
4. Internal details such as door and window handles were often special decorative features of a house, and should be retained. Reproduction details can be expensive, so it is preferable to use originals where possible.

Doors and Windows

1. Original external building features such as timber windows and doors should be retained in their original configuration and dimensions.
2. Timber was generally painted externally, not varnished. Priming undercoat and top coat provides the optimum protection against weathering.



Inappropriate window types with horizontal emphasis

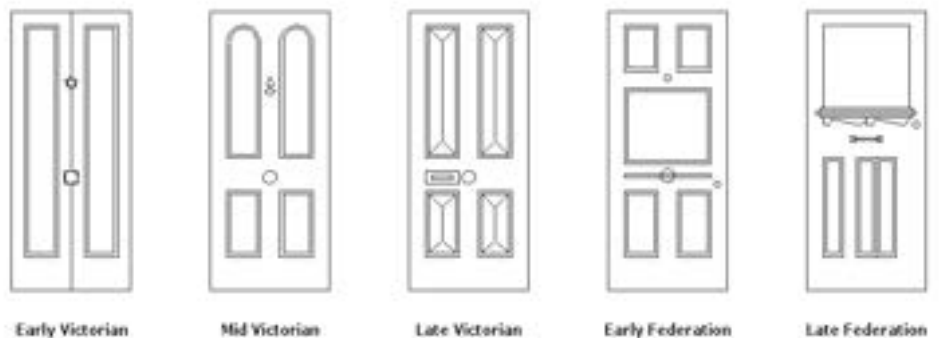


Figure 1 - Doors and Windows

Internal Alterations

1. The removal of internal walls is generally not recommended as this can impact on the structural stability of the building in addition to its integrity and character.
2. The majority of walls in older buildings are load bearing. The structural stability of the outer shell is dependent on the internal existence of walls, stairways and chimneys. It is therefore important to avoid:
 - Radical intervention in the interiors of older buildings;
 - Subdivision of rooms.
3. Original details such as paneling, ceilings, skirtings, architraves or remaining door and window furniture, should be retained.
4. Where fire safety upgrading of buildings is required this should be achieved in as sensitive way as possible. The NSW Heritage Office has published a manual titled *Heritage on Fire* which provides practical solutions to fire safety issues.

Lath and Plaster

1. Where lath and plaster remains in listed heritage items, the comprehensive replacement of walls and ceilings should be avoided. It is possible to re-adhere lath and plaster finishes where plaster is cracked or drummy.
2. Specialists in this field are available to provide advice and expertise.

Timber

1. Keeping timber dry is very important to reduce the risk of wood deterioration as a result of fungal rot, attack by borers and termites, and swelling and shrinkage cracking.
2. It is essential, therefore, that roof drainage, guttering and stormwater drains are operating properly, and that surface water is drained away from walls.
3. Coatings such as paints, varnishes, waxes and oils are the principle means of controlling swelling as well as protecting and enhancing timbers.
4. Wooden items need regular maintenance and should be inspected every six months. Subfloor spaces should be inspected for signs of rot and termites, and roof spaces for evidence of leaks, which may lead to fungal growth.

Timber Repair

1. Sometimes wood is so badly deteriorated that it needs to be replaced. It is good conservation practice to replace the minimum necessary, and to use the skills of a carpenter or joiner.
2. The aim should be to reconstruct the original form of the damaged section so that the repair does not detract from the appearance of the original work.

A number of **reference books** are available on Australian styles of landscaping. **Appendix D** provides a list of Heritage References

Landscaping and Fences

1. Early plantings are important elements of a Conservation Area or heritage item. They can often be landmarks and contribute to the setting of a building. The maintenance or restoration of gardens can add to the authentic conservation of a building.
2. Original fences also contribute to the significance of a building or area and should be retained and maintained. These may be very modest in scale but everyday fences play an important role in establishing and maintaining the heritage significance of an area.
3. Gardens have changed in fashion, like buildings over time. Gardens in Victorian times were influenced by English designs, which used introduced plantings in symmetrical patterns. Later Federation gardens in the 1900's used curved beds and paths combined with a mix of introduced and native plants.
4. The planting of certain tree species near the footings of load bearing buildings should be avoided as they can lead to the drying out of subsoils and may result in the structural failure of the building. When gardens are placed too close to buildings, problems may also occur due to changed moisture or ventilation conditions.

Colour Schemes

1. Repainting of buildings should occur as part of general maintenance. Colour schemes that are in keeping with the period of the building will enhance its character and the surrounding area.
2. Painting in a colour scheme suited to the age of a building can be well researched using a number of resources.

These include:

- Paint scrapes in areas, which have not been overly exposed to reveal previous colours used.
- Old black and white photographs which show shades on different elements of the building.
- An understanding of traditional colour schemes, which can be obtained by referring to books written about the subject. (see Appendix D - Heritage Supporting Information).
- It is not usually necessary to repeat the use of original colours, but research is often helpful to understand how different areas were treated.
- Paint manufacturers have developed heritage colour ranges, which are useful when deciding on suitable period colours.
- Colour schemes, which compliment the style of the building, will enhance the character of the surrounding area.
- The dominant use of bright corporate colours on building facades is generally inconsistent with maintaining the heritage character and significance of a building and/or Conservation Area. Well-placed and proportioned signage can provide the clear information needed for effective street presence of a business.

F1.3 Heritage consent requirements

F1.3.1 Development not requiring consent

Regular and appropriate maintenance is essential to all buildings to protect the fabric from the effects of age and weather and prevent deterioration of the property.

Maintenance and repair works are encouraged for heritage items and all properties in conservation areas and generally do not require development consent from Council if they are of a minor nature and would not adversely affect the heritage significance of the item or conservation area.

Maintenance and repairs includes works such as:

- Painting and decoration to the interior to the house and installation of joinery items;
- Removing leaf litter from gutters to prevent deterioration or replacing guttering;
- Tightening fixings to ensure fixtures are securely held in place;
- Re-hinging doors and gates;
- Replacing broken windows, fly screens etc;
- Minor repairs to roofing, brickwork, timberwork and metal work;
- Pest control; and
- Repainting surfaces which are already painted (Council may be able to assist with suggesting sympathetic colour schemes) including timberwork and metalwork.

The Greater Taree Local Environmental Plan 2010 also contains some exceptions where Development Consent is not required if in the opinion of Council:

1. The proposed development is of a minor nature or consists of maintenance of the heritage item or of a building, work, archaeological site, tree or place within a heritage conservation area; and
2. The proposed development would not adversely affect the significance of the heritage item or heritage conservation area.

The applicant must notify Council in writing of the proposed development. Before any work is carried out, the applicant must obtain a written response from Council stating it is satisfied that the proposed development will comply with points 1 and 2 above and that development consent is not required.

Applicants are also to refer to the **State Environmental Planning Policy Exempt and Complying Development Codes 2008 (CODE SEPP)** for exempt and complying development criteria.

Further information is available on the **Heritage Office** website. www.heritage.nsw.gov.au

F1.3.2 Development requiring consent

A development application is required for the carrying out of development, which relates to an archaeological site, heritage item or a property in a heritage conservation area (unless a determination has been made as mentioned in Part F1.3.1).

F1.3.3 Demolition

The demolition of an archaeological site, heritage items or items within a Heritage Conservation Area is contrary to the intent of the heritage listing and should be treated as a last resort.

In assessing an application for the demolition of a heritage item or a contributory building, Council will consider:

- the heritage significance of the item or the Building;
- the structural condition;
- comparative analysis of options; and
- the contribution the item or building makes to the streetscape.

If the structural capability of the building is in question, Council may request the submission of a report by a structural engineer with heritage experience to determine whether the building is, or is not, structurally capable of reasonable and economic use.

Where demolition is approved it will generally be a conditional upon the submission of a Statement of Heritage Impact and further an archival record of the building and site. The NSW Office of Heritage has guidelines for the preparation of these documents.

As a minimum black and white photographs with negatives and colour slides should be submitted for archival recordings,. All photographs should be keyed to a plan of the building(s). In some cases, particularly where the building is of regional or State significance, measured drawings will also be required. These should illustrate all elevations of the building(s) and the site, plans and sections and details of decorative features of the building(s).

F1.3.4 Change of use

Maintaining the original use of a building usually achieves the retention of the original floor plan of the building and decorative features such as fireplaces, chimneys, ceiling roses and cornices. The continuation of an original use of a building also enhances its heritage significance.

However, this is not always possible, due to changes in technology and changes in market/social trends. Changing the use of a heritage item may be acceptable on heritage grounds in many cases provided the use is compatible and the heritage significance of the item is not adversely affected. The Burra Charter includes a definition for compatible use as follows:

'Compatible use means a use which involves no change to the culturally significant fabric, changes which are substantially reversible, or changes which require minimal impact.'

Each new use will inevitably bring change to the fabric of the place. When considering new uses it is important to try and ascertain what the likely impact of a proposed use will be. Will the changes affect the significance of the place? Will they be minor or reversible? If the original use of a place becomes redundant, finding another similar use may help in retaining the place's significance. Sometimes a continuing historical use is the reason why a place is considered important and continuing that use is essential. There is a danger that gradual cumulative changes will reduce the ability to interpret significant aspects of the building. Very different uses (such as commercial uses in a former dwelling) may require significant changes to the building fabric, because of the need for amenities, or perhaps fire-rating of walls and ceilings. It is important to alter as few original features and/or materials as possible when changing the use of a building.

F2. Development requirements

This section is to be **read in conjunction with the other parts of this DCP** relevant to the type of development proposed.

Heritage buildings and conservation areas are not museum exhibits, they are our homes and workplaces and need to adapt to modern lifestyle requirements. Such adaptation can be successfully accommodated without detracting from the building's heritage significance. The following development assessment requirements identify the main principles and elements, which need to be considered to ensure protection of heritage significance.

All new development in conservation areas should be treated as infill development and should respect the design of its neighbours and the key values of the conservation area.

Similarly, all new development adjacent or in the vicinity of a heritage item/archaeological site should also respect the heritage design and its key values.

Alterations and additions to heritage items and contributory buildings within a conservation area are to be designed and sited to ensure the retention of any contributory features or characteristics of the building and the streetscape of the conservation area in which they are located. It is also encouraged to remove nonconforming parts and put back detail known from documentary evidence to have once existed.

Heritage requirements contained in this part apply **in addition** to the development requirements of other relevant parts of this DCP.

The following guidelines, requirements and controls aim to ensure that development is sympathetic to the key values and heritage significance of the archaeological site, heritage item or heritage conservation area and apply to:

- alterations and additions to heritage items
- all development affecting buildings and sites within a heritage conservation area.

F2.1 Site requirements

F2.1.1 Siting and setbacks

Explanation

Front and side boundary setbacks are a major contribution to the character and significance of a heritage item or heritage conservation area. Existing patterns should be maintained where new development occurs to continue the established rhythm of buildings and spaces. This section suggests ways in which new buildings can be designed and located in harmony with existing development in historic areas. It aims to encourage an appreciation of the special character, features and setting of an area, then to reflect this understanding in the design of the new building.

This section relates to new development on the site of a heritage item, on vacant land in a Conservation Area, or land, which is in the vicinity of heritage items or Conservation Areas.

Objectives

- Ensure that new buildings provide a setting for adjoining heritage item/s so that historical context and heritage significance are maintained;
- Maintain and enhance the existing character of the street and the surrounding area;
- Ensure that new alterations or additions respect established patterns of settlement (i.e. pattern of subdivision and allotment layout, landscaped settings, car parking and fencing);
- Provide an appropriate visual setting for heritage items and heritage Conservation Areas; and
- Ensure that the relationship between buildings and their sites that contribute to the character of the area are not disturbed or devalued.

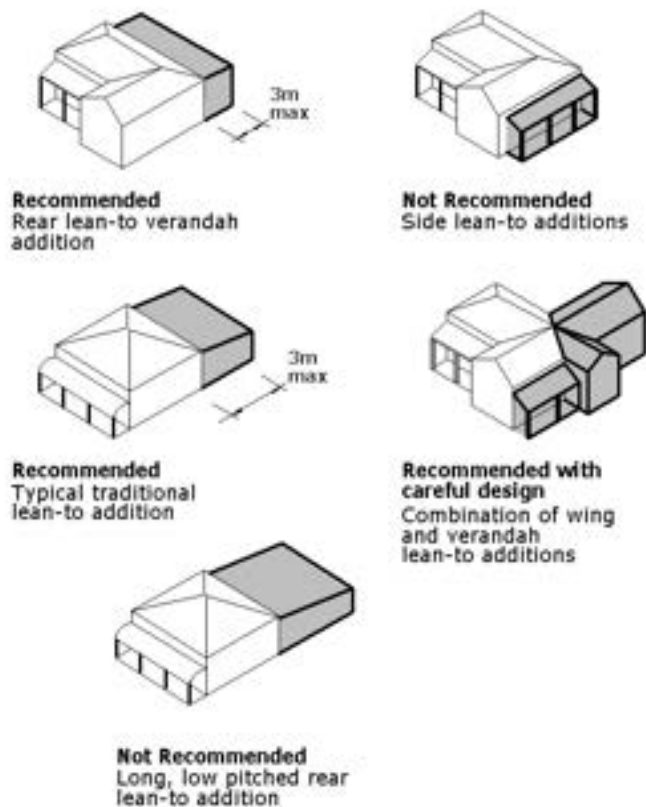
Performance criteria

1. Generally alterations or additions should occur at the rear of the existing building to minimise visual impact on the street frontage of the building, particularly where the additions and alterations involve a listed heritage item or a building that contributes to the heritage character of the Conservation Area.
2. Side additions should not comprise the ability for driveway access to the rear of the block.
3. An adequate curtilage including landscaping, fencing, and any significant trees should be retained.
4. Larger additions can be successful when treated as a separate entity to retain the character of the original building in its own right.
5. Front and side setbacks should be typical of the spacing between buildings located in the vicinity of the new development.
6. The orientation pattern of buildings existing in the area should be maintained.

7. Rear additions are generally best stepped back from side building lines.
8. Extensions to the side elevation will not be appropriate if they alter established patterns of building and garden.
9. Additions to the side of a building should not remove or sever car access to the rear, where it is not sympathetically provided elsewhere.
10. Archaeological evidence should not be disturbed without Council approval.
11. Where there has been known building sections which have been removed, and the building fabric has been substantially altered such that only its position on the site maintains its original context, further alterations which remove footprint evidence may not be appropriate.

For New Development:

1. Development in the vicinity of listed heritage or within heritage Conservation Areas items should respect and complement the built form character of those items in terms of scale, setback, siting, external materials, finishes and colour.
2. New development should have regard to the established siting patterns of the locality.
3. New development should generally be set back from the building line of the adjoining or adjacent heritage item.
4. The sensitive selection of materials, colours and finishes is important in terms of achieving compatibility with the heritage items.
5. Height and scale of new buildings should not obscure or dominate an adjoining or adjacent heritage item.
6. Development in the vicinity of a heritage item may be contemporary in design.



LEAN-TO ADDITIONS

Extending your house out the back in the form of a lean-to or skillion is probably the most familiar and economical type of small addition, of up to 3 metres in depth. If the lean-to addition is set behind the original house, the impact to the street facade is often minimal. The form, shape and size of the original house usually remains clearly visible and is not dominated by the smaller lean-to addition. However, large or conspicuous lean-to additions are generally not recommended. It is important that the scale and roof pitch of the new work be compatible with the original character of the building. For example, the roof pitch should ideally match the pitch of any verandah roofs. If there is an existing verandah it may be possible to extend it along the side of the building to create additional space. A long extension with a minimal roof pitch is generally not recommended.

Figure 2- Lean-to additions

F2.1.2 Gardens and garden elements

A number of **reference books** are available on Australian styles of landscaping. **Appendix D** provides a list of Heritage References

Explanation

Period gardens enhance the relationship of the house to its setting. The garden softens and enhances views of the house and screens out unsympathetic buildings or alterations and additions.

Objectives

- Maintain the rhythm of gardens, open spaces and tree planting in a heritage streetscape;
- Ensure that planting does not compromise important views into or out of Conservation Areas; and
- Maintain the landscape character of the locality in any new development.

Performance criteria

1. When designing new gardens, reference should be made to surviving plants, which indicate the basic garden structure, and can be worked into new designs.
2. When selecting suitable trees, the following should be considered:
 - The varieties that already exist in the area;
 - The size of the tree when mature;
 - The potential of the chosen species to interfere with services; and
 - Retaining walls and other structures.
3. Heritage garden reference books are available to explain typical settings for houses of different styles and periods.
4. Hard surfaces should be kept to a minimum. Screening of hard surfaced areas is encouraged.
5. Garden structures should be appropriate to main buildings in terms of scale, style and materials.
6. Original surfaces such as close jointed brick paving or stone flagging common to Victorian and Federation sites, and pebble aggregate, quarry tile or mosaic tile aprons common to later Californian Bungalow styles should be retained.
7. Generous green landscaped areas should be provided in the front of new residential buildings where ever possible. This will almost always assist in maintaining the character of the streets and Conservation Areas.
8. New landscaping should not interfere with the appreciation of significant building aspects such as building facades.
9. Important contributory landscape characteristics such as canopy cover or boundary plantings should be retained in new development.

F2.2 Building requirements

F2.2.1 Design and character

Explanation

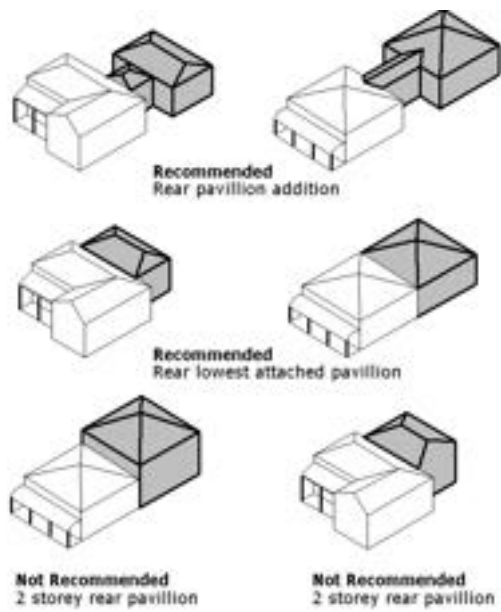
The design should aim to ensure a sympathetic blend of old and new. This may be achieved by designing in keeping with the street's established building scale and form, siting and setbacks and materials and finishes without being overly imitative. Careful attention needs to be paid to adjacent development and to the existing streetscape.

Objectives

- Ensure that new alterations and additions respect the architectural character and style of the building and area concerned;
- Maintain and enhance the existing character of the street and the surrounding locality; and
- Enhance the public appreciation of the area.

Performance criteria

1. An alteration or addition must consider the characteristics of the existing building, and buildings in the surrounding area, and sit comfortably in this context.
2. New work should generally not precisely mimic the design and materials of the building, but be recognisable as new work on close inspection.
3. Mock historical details should not be applied as they will not be of any heritage value themselves, and can confuse our understanding between the new and the old.
4. Alterations and additions should blend and harmonise with the existing building in terms of scale, proportion and materials.
5. Alterations and additions should not require the destruction of important elements such as chimneys, windows and gables.



PAVILLION ADDITIONS

This form is the most appropriate where large additions are planned. Pavillion additions are achieved by introducing a link between the pavillion and the original house or by attaching the pavillion directly. To minimise the impact on the street view of the house the pavillion addition should be located behind the original house.

The pavillion concept can be incorporated cleverly into the floor plan to create separate areas within the house - for example the new pavillion could contain only children's bedrooms and play areas or perhaps only a parent's retreat or a kitchen family room.

Figure 3 - Pavillion additions

F2.2.2 Scale and form

Explanation

The composition and proportion of building facades often form a pattern or rhythm, which give the streetscape its distinctive character. Traditionally, older buildings up to the 1930's used vertical proportions, reflecting the construction technology of the day. Modern technology allows for much greater spans and often leads to a horizontal emphasis. The shape, proportion and placement of openings in walls are important elements in the appearance of a building.

In the majority of cases the Taree conservation areas are flat or with slight falls. This means that particular attention should be given to approach views and internal views of existing landmarks which should not be jeopardized. Large unbroken roof spans may be obtrusive in flat areas of low scale buildings. Articulation of the floor plan can be a useful way to break up large spans.

To ascertain the appropriate scale of new buildings, the following design aspects are of particular importance:

- Reference to the main ridge line heights of original surrounding buildings;
- Natural ground or street levels;
- Ensuring different parts of the building are in scale with the whole;
- Ensuring the scale of verandahs relate to the scale of those in adjacent buildings.

Objectives

- Ensure that new alterations and additions respect the character, scale and form of the building and surrounding area;
- Ensure that the scale and proportions of new buildings respect the significance and character of the surrounding area and not detrimentally impact upon an established pattern of development in the vicinity.

Performance criteria

1. An alteration or addition should not be of a size or scale, which overwhelms or dominates the existing building, substantially changes or destroys its identity or changes its contribution and importance in its surrounds.
2. New uses should be chosen which suit the size of the building, not requiring overwhelming changes.
3. Unless it can be demonstrated that greater scale would be appropriate in the individual circumstances, additions should be of the same scale.
4. The scale of a new house should be related to the size of the allotments laid out in the historical subdivision pattern of the area.

5. New buildings should be in scale of surrounding dwellings. Large houses on small allotments will tend to look awkward and dominate the surrounding area. Large houses may be better located on large allotments in less sensitive areas.
6. New houses should generally remain at single storey in areas where the majority of buildings are single storey.
7. Landmark buildings in Conservation Areas, which may be heritage items, mansions or public buildings will generally be surrounded by single story buildings, or those of a lesser scale. These landmark buildings should not be used as a precedent for increasing the scale of new buildings. New buildings should rather relate to the scale of existing development around the landmark and respect its prominence.
8. Openings in visible frontages should retain a similar ratio of solid to void as to that established by the original older buildings.
9. New buildings should incorporate the typical proportions of surrounding development, even when using modern materials.
10. New buildings should establish a neighbourly connection with nearby buildings by way of reference to important design elements such as verandahs, chimneys or patterns of openings.

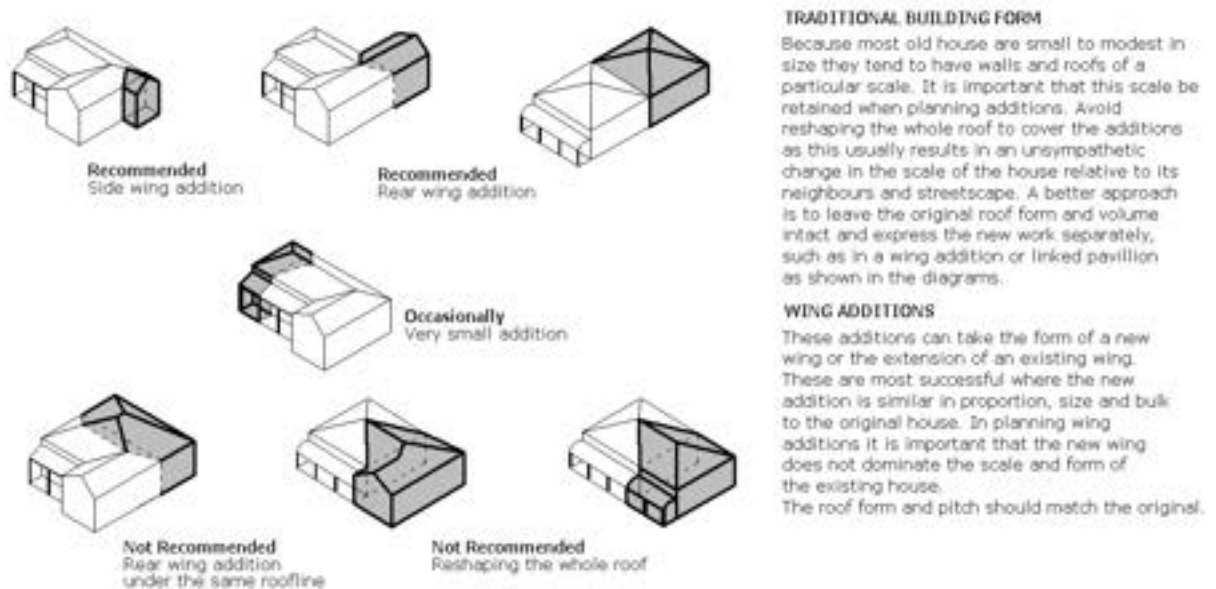


Figure 4 - Building forms

F2.2.3 Roof forms and Chimneys

Explanation

Roof forms and details to heritage buildings vary according to building type and architectural style. This variety makes an important contribution to the aesthetic significance and visual complexity of heritage items and heritage conservation areas. Fireplaces and chimneys were an important element in buildings up until the middle of the twentieth century, contributing to the character and skyline of the building.

Objectives

- Retain the characteristic roof forms within Conservation Areas and on heritage items when designing alterations and additions.

Performance criteria

1. Roofs of extensions should be carefully designed so that they relate to the existing roof in pitch, eaves and ridge height.
2. Additional rooms can be added to heritage buildings appropriately where roof forms have been carefully integrated into the existing.
3. If it is important that the roof form remains unaltered, additional rooms can be added in a detached pavilion form placed at the rear or possibly the side. Roof pitch, ridge height, height of parapet and eaves on additions should relate to those of the original building.
4. Providing the roof space is large enough, attic rooms should be contained in roof forms for non-habitable uses such as a study or a library. The volume required for habitable uses such as bedrooms may mean unacceptable alteration to roof form.
5. New roof elements such as dormer windows and skylights should not be located where they are visually prominent.
6. Chimneys should be retained.
7. Service utilities such as water heaters, air conditioning units, antennae, satellite dishes must not be located on the principle elevations of buildings.
8. Use of roof materials should be the same as materials on the existing heritage building and those typically used in the Conservation Area.
9. New buildings should be designed in sympathy with the predominant roof styles of the area.

F2.2.4 Detailing

Explanation

The significant features and elements of a heritage item or conservation area are often reflected in details such as windows, doors and decorative woodwork, metalwork, brickwork, stonework and cement render.

Objectives

- Ensure that original detailing is retained and kept in good repair;
- Encourage the reinstatement of original elements and detail;
- Ensure that detailing on new buildings respects but does not imitate original detailing on older surrounding buildings.

Performance criteria

1. Avoid fake or synthetic materials and detailing. These tend to give an impression of superficial historic detail.
2. Avoid slavishly following past styles in new development. Simple, sympathetic but contemporary detailing is more appropriate. Original materials and details on older buildings need not be copied, but can be used as a reference point.
3. Retain and repair original doors, windows, original sunhoods, awnings, gable detailing and other decorative elements to principal elevations. Original leadlight and coloured glass panes should be kept.
4. Where original windows, doors and façade detailing have been removed and replaced with modern materials, consideration should be given to reconstructing original features.
5. Authentic reconstruction can have a major positive impact and is encouraged. Decorative elements should not be introduced on heritage items and buildings within a heritage conservation area unless documentary or physical evidence indicates the decorative elements previously existed. Undertake thorough research before attempting to reconstruct lost detail and elements.
6. Alterations and additions and new buildings should adopt a level of detailing, which complements the heritage fabric, rather than mimic inappropriate heritage detailing and should (in general) be less elaborate than the original.

F2.2.5 Building elements, materials, finishes and colour schemes

Explanation

Often it is not possible, or desirable, to replicate original materials due to cost constraints or lack of availability. The principle should be to use materials and colour schemes, which visually relate to or approximate the building elements of the earlier work in size, style and type of finish.

Council can provide examples of **heritage colours**, which may be used to create traditional colour schemes.

The painting of heritage items in appropriate colours can draw attention to the buildings and reinforce their historic character. Original face brickwork should not be rendered, bagged or painted, as this will detract from the building's heritage significance.

Objectives

- o Ensure that materials and colours used on new buildings and alterations and additions respect the significance and character of existing buildings and surrounding areas.

Performance criteria

1. Traditional combinations of materials used in heritage buildings should be considered when designing additions.
2. It may not be appropriate or necessary to replicate the original combination of materials used in the original work. The use of a complementary material might make the increase in scale less noticeable and also enhance later understanding of the changes. For instance, timber weatherboard extensions to brick houses was a common practice which is still appropriate today, as was the use of corrugated iron roofs at the rear of houses behind main roofs constructed with tile or slate.
3. The use of highly reflective materials should be avoided.

Doors and Windows

1. Timber windows should be retained in existing buildings. New doors and windows should be of materials characteristic to the existing building.
2. New doors and windows should proportionally relate to typical openings in the locality.
3. Simply detailed four panel doors or those with recessed panels are generally appropriate.
4. Mock panelling, applied mouldings and bright varnished finishes should be avoided.
5. Older houses have windows, which are of vertical orientation, and this approach should be used in new buildings.
6. Standard windows often come in modules of 900mm wide. Their use should be limited to single or double format only. The most suitable windows are generally double hung, casement, awning or fixed type.
7. If a large area of glass is required, vertical mullions should be used to suggest vertical orientation. A large window could also be set out from the wall to form a simple square bay window making it a contributory design element rather than a void.

8. Coloured glazing, imitation glazing bars and arched tops are not encouraged.

Roofing

1. Original roof material should be matched in any addition in material and colour. If, however original roofing is expensive such as slate, corrugated iron is a suitable alternative to the rear.
2. Traditional stepped flashings, roof vents, gutter moulds, and rainwater heads should be used.
3. Corrugated galvanized iron (or zincalume finish) is a most appropriate roofing material for new buildings in historic areas. It is also economical and durable. Pre finished iron in grey or other shades in some circumstances may also be suitable.
4. Tiles may be appropriate in areas with buildings dating to the 1900's – 1930's. Unglazed terracotta tiles are the most appropriate. The colour and glazing of many terracotta tiles make them inappropriate.
5. Other materials to avoid include modern profile steel deck.
6. Ogee profile guttering is preferable to modern quad profile.
7. Plastic downpipes should be avoided in prominent positions.

Brickwork

1. New face brickwork should match the existing brick in colour and texture, and type of jointing and mortar colour. It may be possible to obtain second hand bricks to match the original or new bricks, which will closely match.
2. Existing facebrick or stone on heritage items or heritage buildings in a Conservation Area should remain unpainted and unrendered.
3. New brick buildings in Conservation Areas are to take into consideration surrounding buildings brick colour and type. Light coloured brickwork in Conservation Areas is not acceptable.

Imitation Cladding

1. Imitation timber boarding is not acceptable for additions to heritage items or work visible from the street in Conservation Areas.

Colour Schemes

1. Additions should employ colour schemes, which do not detract from traditional colour schemes in the area.
2. Colour schemes suitable to the period of the building should be used. Researching the original colour scheme may involve stripping existing layers of paint in a small sample area.
3. Unpainted brick or stone should remain unpainted.

Paving and Driveways

1. Preferred materials for driveways include wheel strips and gravel. Large areas of plain or stamped concrete should be avoided.
2. Paired wheel strips over public footway areas are preferable to solid driveways.

F2.2.6 Timber Buildings

Explanation

There are three general construction types that appear in the Manning and Taree areas in regard to timber buildings. This is also true of the North Coast generally and of much of rural New South Wales. These construction types were once well represented within the Sydney Metropolitan Area and surrounding regions but, in two of the three types, are no longer well represented. The three types are the split slab construction, the plank house and the weatherboard house.

The term **slab** is reserved for split timber construction, split slab houses were the normal construction in rural areas before the ready availability of sawn timber.

Plank construction was an extension of the split slab construction. At first it used thick, random width planks that still needed cover strips for a weather seal but provided square edged timber of even thickness that did not need adze trimming.

Weatherboard houses were built from the area's earliest days and became more common as technology evolved.

Objectives

- Ensure retention of original timber walls, verandah and feature details.
- Encourage the retention and repair of timber structures.

Recommendations

- Sometimes wood is so badly deteriorated that replacement of a section of timber is the only option. It is good conservation practice to replace the minimum necessary, and to do it with the traditional skills of the carpenter, joiner and cabinetmaker.
- The aim should be to reconstruct the original form of the damaged timber so that the repair does not detract from the appearance of the old work.
- Preferably, repairs should be done on site so that original fixings and fastenings are not lost.
- To repair rotted timber and to be certain of removing all active fungi, remove the visible decayed zone together with any surrounding area affected. Apply fungicides, or paint that includes fungicides, to the remaining timber as a precaution.
- Resist the temptation to repair every small knock or dent.
- Try to repair joinery on site wherever possible, as the process of removal and refitting inevitably results in further damage. If decayed timber needs to be removed to form a splice or patch repair, take off just enough timber to allow an effective repair.
- Always fit the new material to the profile of the old.

F3. Ancillary development requirements

F3.1 Carports and garages

Explanation

Most early buildings were designed without garages or carports. The house itself was usually the only structure visible from the street. Later motor garages were commonly located as a separate structure to the rear of the property.

Objectives

- o Ensure that garages, carports and sheds do not detract from the character of the area and/or heritage item due to inappropriate location, design and/or materials.

Performance criteria

1. Garages should preferably be located at the rear or set well back at the side of a building behind the rear building line.
2. Garages and carports should make reference to any established historic patterns in the street.
3. Use of landscaping such as screening or planting and front fences may be useful tools in integrating the structure with its site.
4. Double garages should be detached buildings set behind the rear main building line.
5. Colours and materials should blend into the surrounding landscape. Galvanised corrugated iron roof profile and timber board profile cladding for walls are common materials used.
6. Garages should have simple hipped, gable or skillion roofs depending on the design of the existing main building.
7. Gable or hipped roof with skillion roofed attachment is the most appropriate double garage roof form.
8. Existing outbuildings should be maintained and reused wherever possible.
9. Simple open light construction carports are preferable to solid heavily detailed buildings.
10. The pitch of a single garage roof should, in most cases, be comparable or slightly lower than that of the main building – generally 25 – 30 degrees.
11. The pitch of a double garage roof should be lower than that of the main building.

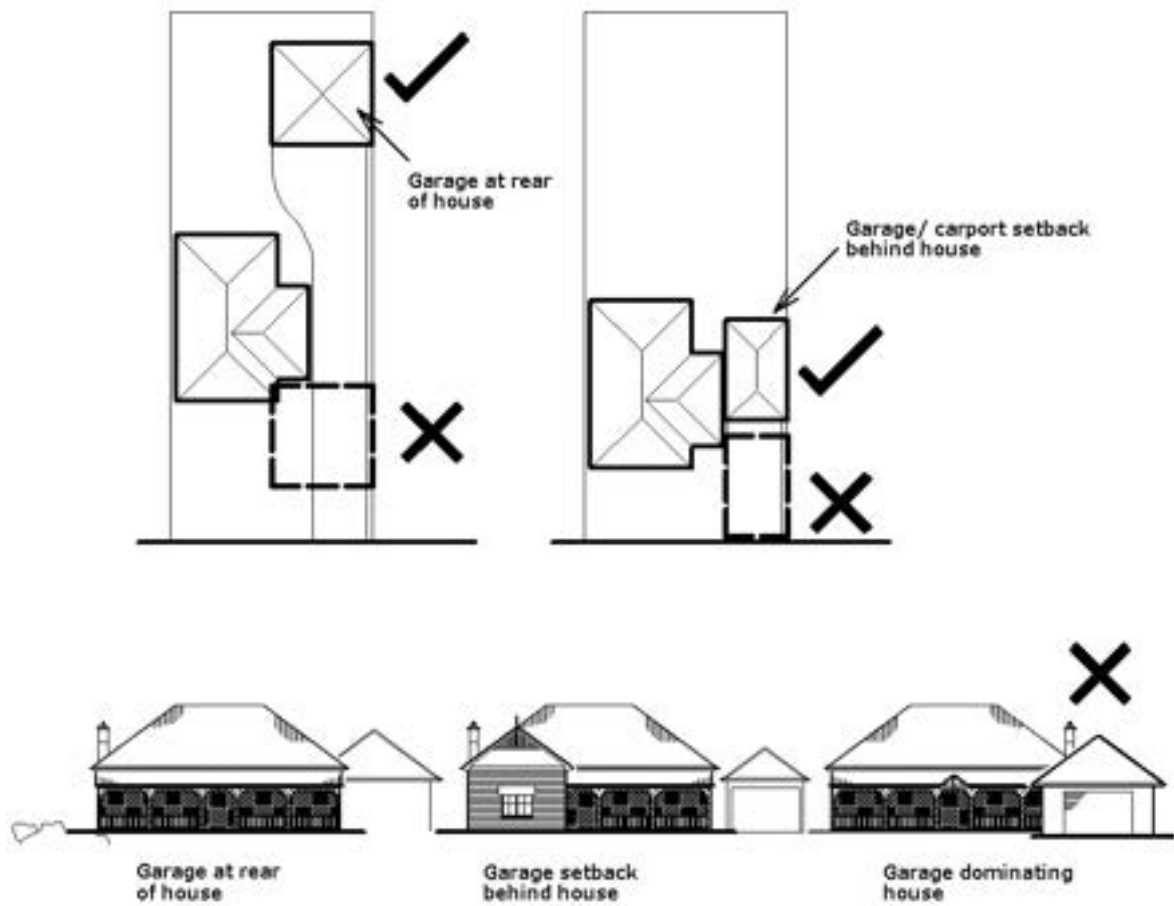


Figure 5 - Garage placement

F3.2 Fencing

Explanation

Fences form an integral, yet fragile part of heritage areas. The majority of historic fences have disappeared, so it is very important that those authentic fences, which remain, are preserved.

When repairing an original fence, determine:

- What is significant about the fence?
- Is it unusual or typical of its time?
- Its style.
- Its physical condition.

It is important to retain as much of the old material as possible. When constructing a new fence and there is insufficient evidence to reproduce the original, it is important to build the fence so that it is in harmony with the existing fences and houses of the street. Ensure that the height matches that of (sympathetic) neighbouring fences, and that the colour scheme is compatible with the house.

Objectives

- Retain original existing fencing and provide for new fencing that is consistent with established patterns.

Performance criteria

1. Original fences should be retained.
2. Fences should be located on building line.
3. Fences should be simple with a level of detail comparable with the house.
4. Fencing should generally be open or transparent, or backed with a hedge, not solid.
5. Fences should be of a scale comparable with the street.
6. Front fences should be of materials characteristic to the surrounding area, particular to the street and suitable to the era of the house. Examples include timber picket, low masonry and hedges.
7. Plain or colour treated metal fences are not considered to be appropriate for Conservation Areas or Heritage Items on any street frontage or side boundary.

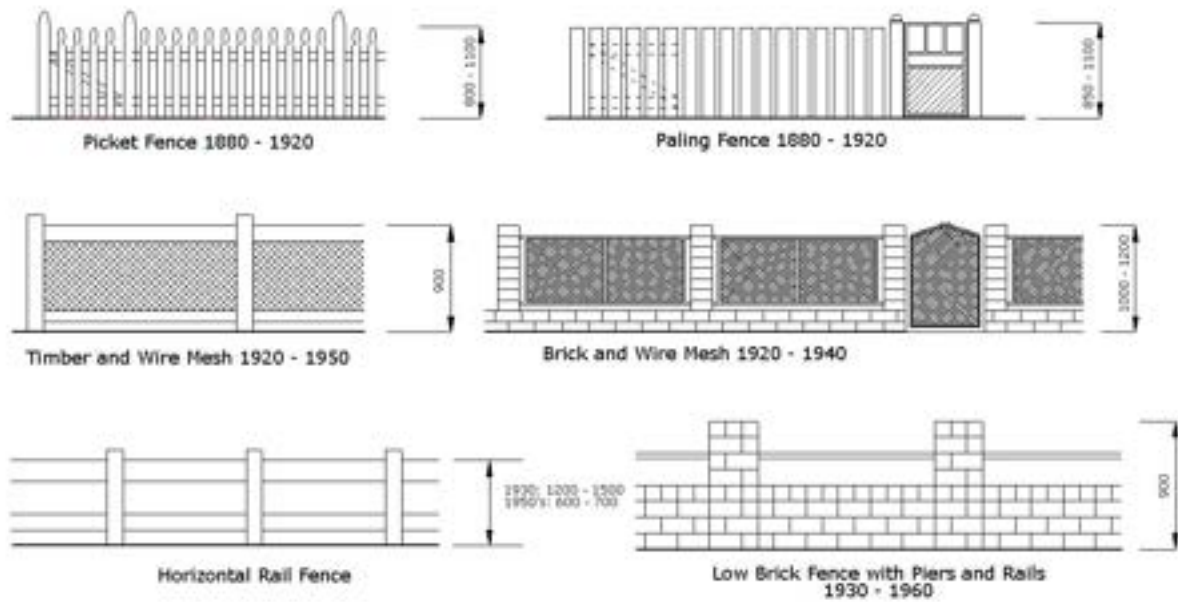


Figure 6 - Fencing styles

F3.3 Services and new technologies

Explanation

Council encourages the installation of devices, which improve the water conservation and energy efficiency for housing. However, on heritage items and in conservation areas new technologies (such as solar heating and telecommunications structures) should not be visible from a public place nor intrude on any views or vistas gained from neighbouring properties. The style, siting and visual treatment of such structures should be discrete and not intrusive.

Objectives

- Minimise any obtrusive effect of new building services and technical equipment in Conservation Areas and on heritage items.

Performance criteria

1. Exhaust vents, skylights, air conditioning ducts and units, solar panels, TV antennae and satellite dishes should not be visible on the main elevation of the building or attached to chimneys where they will be obvious. Items should be installed at the rear, within the roof space or flush with the roof cladding and at the same pitch. They are to be of modest size and not prominent from the street.
2. Essential changes to cater for electrical wiring, plumbing or other services should be limited to what is essential to permit the new use to proceed.
3. Rainwater tanks are to be located at the rear or side of the dwelling and suitably screened. They should not be obvious from the street.

Part G

Car Parking and Access



Greater Taree
CITY COUNCIL

PART G CAR PARKING AND ACCESS

Contents

G1	Car parking and access	3
G1.1	Location of driveways.....	6
G1.2	Service vehicle requirements.....	7
G1.3	Parking requirements for specific land uses	8
G1.4	Car parking requirements	12
G1.5	Contributions in lieu of providing off street parking	13

G1 Car parking and access

About this part:

This part provides the general guidelines for parking and access.

Applies to:

All development within Greater Taree City Council.

Date adopted by Council:

14 October 2009

Effective date:

25 June 2010

Related Policy / Technical Manual:

Australian Auspec Guidelines.

Ausroads Guide to Traffic Engineering Practice

Principle objectives

- To ensure that suitable and adequate off street parking facilities are provided to accommodate vehicles generated by various developments;
- Ensure sufficient and practical design of parking and access areas;
- Provide safe entry and exit for vehicles and pedestrians from parking areas;
- Ensure adequate access and manoeuvrability for service vehicles.
- Ensure quality of parking areas in terms of safety, amenity and integration with surrounding areas.
- Ensure a balance is achieved between the needs of proposed development and the needs of vehicular and pedestrian traffic.
- Ensure the provision of sufficient and suitably located parking for persons with a disability, cyclists, and motorcyclists within appropriate developments.
- Ensure landscaping and the materials of construction improve the amenity of the parking areas.
- Provide parking areas which promote ease of access as well as suitable internal circulation patterns.
- Ensure that adequate provision is made for off-street parking of passenger and service vehicles generated by new developments and redevelopments.
- Provide acceptable alternatives in lieu of on-site parking which:
 - Enable Council to responsibly consider development proposals which do not comply with the on-site parking requirements of this DCP.
 - provide a mechanism to avoid the development of numerous small-scale dispersed car parks
 - promote the establishment of strategically located larger parking facilities
 - Ensure adequate facilities are provided within a development for the loading and unloading of persons and goods.

Performance criteria

General requirements for all development

Applicants are also referred to the **AS 2890.1 Off Street Car Parking**

1. Car parking spaces will not be permitted closer than 3m to the street alignment in residential areas and 6m to the street alignment in industrial areas. Wherever practical a minimum 3m set back will also be applied in commercial areas.
2. The minimum width of an enclosed garage shall be 3m. The garage opening may be a minimum of 2.6m provided the width is sufficient to allow convenient access to and from the garage in accordance with the design car turning path.
3. Combined entry/exit driveways are to have a minimum width of 6m and singular driveways (separate entry/exit ways) are to have a minimum width of 4m, unless otherwise specified.
4. Hardstand areas should be minimised, but where used shall be concrete or bitumen and, where soil conditions and vehicular traffic permit, be substantially constructed using semi-pervious materials.
5. All rights of way and access corridors for battle axe blocks shall have a concrete driveway constructed to the satisfaction of Council in conjunction with civil works required for subdivision. The driveway shall be a minimum of 3m wide and is not to service more than 3 lots.

General requirements for commercial, industrial and mixed use development

For technical requirements and standards
applicants are to refer to the Auspec Guidelines on Council's website under "Engineering Development Specifications"

1. The design must incorporate rational circulation pattern.
2. Entrance/exit facilities must be capable of accommodating peak loads.
3. Parking, access lanes and manoeuvrability areas shall be constructed, paved and drained in accordance with Council's standards. Parking spaces shall be permanently and clearly identified.
4. Parking area surfaces shall be constructed in bitumen or concrete, however the use of alternative and permeable surface treatments is encouraged where soil conditions and vehicular traffic permit.
5. Landscaping is encouraged in car parking areas in order to improve the appearance of the parking area and provide shade. Landscaping should not restrict entry and exit sight lines, nor result in the parking area being difficult to recognize from the street.
6. Unless otherwise specified all vehicles must enter and leave the site in a forward direction.
7. Adequate space for the manoeuvring of vehicles, particularly rigid and articulated heavy vehicles (where necessary), is to be provided. A manoeuvre width no less than twice the length of the longest vehicle using the facility is recommended.
8. Access roads and internal roadways should be constructed to a level adequate for the largest vehicle anticipated to use the site. Internal road networks are to have a minimum width of 6 meters for two-way traffic with 7.5m being desirable.

9. The design should minimize the potential for vehicular/ pedestrian conflict and should provide a pedestrian connection between the car park and the development.
10. Wheel stops should be provided where appropriate to protect areas from vehicle encroachment, particularly if used by pedestrians.
11. Parking bays for disabled people are to be provided at the rate of 1 space per 50 car parking spaces and located to allow safe and convenient access to a development. Note: A maximum grade of 1:14 should be provided on all pedestrian ramps used by the disabled.
12. In commercial areas pram parking is to be provided at the rate of 1 space per 100 car parking spaces.
13. The first vehicular driveway reached by using the kerbside lane adjacent to the site is to be the entrance.
14. Buildings are to be located and designed so that there is adequate sight distance to and from intersections and driveways.
15. Customer parking spaces are to be provided in locations approved by Council, which will encourage customers to park in the parking area rather than on the road.
16. Unless otherwise specified, access road widths within the site should not be less than the driveway widths specified in DCP Part H2.4 for development up to and including dual occupancy. Internal access road widths for developments greater than dual occupancy should not be less than 6m, and in any case should be designated to accommodate the type of vehicles likely to be generated by the particular development.
17. Designated car parking spaces are not to be used for storage or for industrial garbage receptacles.

G1.1 Location of driveways

Performance criteria

General provisions for all development

A **vehicular driveway** is that part of the vehicular access lying between the edge of the carriageway and the abutting property boundary.

1. A vehicular driveway, entry and/or exit, which crosses the edge of the carriageway and the property boundary, shall:
 - a. Be clear of all obstructions which may prevent drivers from having a timely view of pedestrians;
 - b. Be located such that any vehicle turning from the street into it or into the street from it can be readily seen by the driver of an approaching vehicle in the street;
 - c. Be constructed in accordance with Australian Standard AS2890.1 *Parking Facilities – Off Street Car Parking*.

General requirements for commercial, industrial and mixed use development

1. A vehicular driveway, entry and/or exit, which crosses the edge of the carriageway and the property boundary shall:
 - a. Have separate entry/exit if there is any likelihood that it will be used by vehicles both entering and leaving the site simultaneously which could result in the obstruction or delay of traffic in the street, or where more than 50 car spaces are to be provided;
 - b. Be properly signposted by the use of 'in'/'entrance', 'out'/'exit' and 'keep left' signs, where appropriate;
 - c. Be a minimum of 9m to the prolongation of the property line of any intersecting street;
 - d. Not be on an intersection or within 6m of a break in the median strip;
 - e. Be a minimum of 6m to the commencement of a curve linking the carriageways of the public streets at an intersection;
 - f. Be a minimum of 25m to any signalised intersection;
 - g. Be a minimum of 1m to site boundaries.
2. Where in the redevelopment of an existing site it is impracticable to obtain the distances specified above, the Council may determine that lesser distances will be acceptable. In its determination the Council will have regard to the requirements of Roads and Maritime Services, any improvements in traffic safety, which may result from the proposal and existing and future traffic conditions at the site.

G1.2 Service vehicle requirements

Performance criteria

1. Service areas should operate independently of other parking areas.
2. Convenient and safe access should be provided to facilitate on-site service operations and to thus discourage on-street loading and unloading.
3. Where practical, service roadways should require vehicles to circulate in a clockwise direction.
4. The movement and turning path requirements of vehicles should be used to determine the design and layout of service areas.
5. However, specific requirements peculiar to certain developments may demand more generous space provisions.
6. A minimum of 3.6m headroom should be provided over all areas traversed by service vehicles.
7. For docking purposes, a manoeuvring width of not less than twice the length of the longest vehicle using the facility is recommended.
8. Service vehicular access ways are to be clearly separate from normal customer and resident vehicular access to ensure free movement of service vehicles and safety of pedestrians.

G1.3 Parking requirements for specific land uses

1. In the case of a combination of uses, the total requirements for vehicular parking space shall be the sum of the requirements for the various uses, except where it can be demonstrated that the times of real demand for the various uses do not coincide. In those cases the Council will require parking facilities to be provided to serve the peak cumulative demand.
2. Details and plan of parking areas and driveways shall be submitted with the Development Application indicating method of construction, paving, marking and drainage.
3. In respect of existing premises being altered (including reconstruction), enlarged or converted the following shall apply:
 - a. If the alteration does not result in increased floor space and the use of the building is not significantly changed, then no provision for parking will be required;
 - b. If the alteration results in increased floor area then parking will be required in respect of the increased area only;
 - c. If the use of an existing building, or part thereof, is changed the assessment of parking required will be based on the extent to which the requirement for the new use exceeds the requirement for the former or existing use.
4. Any new consent or consent to alter, enlarge, convert or increase the capacity of any building or the use of any land shall make provision for off-street vehicular parking in accordance with the following table.

LAND USE	MINIMUM NUMBER OF PARKING SPACES REQUIRED (GFA = GROSS FLOOR AREA; NFA = NET FLOOR AREA)
Residential	
Dwelling house	1 space behind building setback and a minimum 3m wide driveway.
Dual Occupancy	1 space per 1 and 2 bedroom dwelling. 2 spaces for each 3 or more bedroom dwelling.
Residential Flat Buildings and Multi Dwelling Housing	1 space per 1 and 2 bedroom dwelling; 2 spaces per 3 or more bedroom dwellings; 1 space per 4 dwellings for visitor parking for development less than 8 dwellings, otherwise 1 space per 3 dwellings.
Boarding House	1 space per 2 rented rooms + 1 space for manager
Health Consulting Rooms (in Residential zones)	2 spaces per consulting room plus one space for the dwelling.
Non-Residential	
Exhibition Homes	2 spaces per exhibition home.
Group Homes/Hostels	1 space per 2 beds. 1 space for any resident caretaker/manager.
Retail	
Shops/Showrooms	1 space per 30m ² of N.F.A. For the area bounded by Commerce Street, High Street, Macquarie Street and the Manning River parking is to be provided at the rate of 1 space per 24m ² of leasable G.F.A.
Markets	1 space per 40m ² of market area

Landscape & Garden Supplies and Other Outdoor Retail/Display Uses/Leisure Goods	1 space per 130m ² of display area. 1 space per 40m ² of G.F.A, including indoor retail areas.
Bulky Goods Premises	1 space per 50m ² of G.F.A, including provision for cars with trailers.
Supermarkets	1 space per 30m ² of N.F.A.
Roadside Stalls	4 spaces.
Fruit and Vegetable Markets	1 space per 25m ² of N.F.A.
Commercial	
Office Premises/Public Buildings	1 space per 35m ² of N.F.A. 1 space per 500m ² for courier/service vehicles.
Auction Rooms	Will be considered individually based on the type of auction, i.e. general goods/vehicles, and the operation time of the auction.
Vehicle Showrooms	1 space per 130m ² of display site area. 6 spaces per service work bay.
Outdoor Displays and Sales	1 space per 130m ² of display area.
Service Station	6 spaces per work bay. 1 space per 20m ² of retail floor space (2 spaces minimum).
Neighbourhood Shops	1 space per 30m ² GFA.
Mortuary/Funeral chapels / Funeral homes	1 space per 3 seats; or 1 space per 9m ² of N.F.A (whichever is greater)
Business Premises	1 space per 30m ² of N.F.A
Restaurants and Reception Centres	
Restaurant (includes Cafe, Tearooms, Coffee Shop and the like)	<u>Where located within a business or industrial zone</u> – 1 space per 30m ² of N.F.A. <u>All other zones</u> - 15 spaces per 100m ² of NFA or 1 space per 3 seats (whichever is the greater)
Function Centre	1 space per 3 seats
Take-Away Food and Drink Premises	(a) Development with on-site seating and drive-through: 1 space per 8.3m ² of G.F.A; plus 1 space per 5 seats (internal & external). (b) Development with no on-site seating or drive-through facilities - 12 spaces per 100m ² of G.F.A. (c) Development with on-site seating but no drive-through facilities - 12 spaces per 100m ² of G.F.A; plus 1 per 5 seats (both internal & external).
Note for drive-through facilities: an exclusive area for queuing of cars is required (queue length of 5 to 12 cars measured from pick up point. This includes a minimum of 4 car spaces for cars queued from ordering point, plus 2 car spaces for cars waiting for orders past the pick up point area.	
Licensed Premises	
Registered Club	Parking to be required to satisfy the peak cumulative development as a whole. A traffic study using comparisons with similar clubs (size / facilities offered) is to accompany each application.
□ Provision for coaches to pick up and set down may also be required for large establishments.	
Hotel	As per Registered Club. Where accommodation is provided 1 space per residential unit/room; + 1 space for any residential manager; + 1 space per 2 employees
Recreation Facilities (including indoor and outdoor sporting venues)	
Amusement Centre	1 space per 35m ² G.F.A; plus bicycle parking

Entertainment Facility	Car parking will be determined on the characteristics of the facility. A submission based on similar facilities parking arrangements will be required.
Bowling Alleys, Squash and Tennis Courts, Golf Courses, Swimming Pools	3 spaces per lane, court or green
Bowling Greens	30 spaces for the first green; and 15 spaces for every green thereafter
Football, Cricket Pitches, Netball Courts, Soccer	Minimum of 15 spaces per pitch or court.
Gymnasiums, Fitness Studios	1 space per 25m ² G.F.A.
Community Facility	Car parking will be determined on the characteristics of the community facility.
Tourist Facility	
Caravan Park	See Part H3.7 for requirements
Motel	1 space per unit/room; plus 1 space for any residential manager; + 1 space per 3 non-resident employees; + 1 space per 6m ² for public entertainment/function/reception room/bar or 1 space per 3 seats (whichever is the greater)
<input type="checkbox"/> Provision for coaches to pick up and set down may also be required.	
Education	
Child Care Centre	1 space for every 4 children in attendance
Educational Establishments	(a) <i>Schools</i> : 1 space per 2 full-time staff member; plus 1 space for every 10 x Year 11/12 students; plus bicycle storage; plus pickup/set down area; plus 1 space per 100 students enrolled for visitor parking. (b) <i>Adult Education</i> : 1 space per 2 staff members; plus 1 space for every 5 students; plus bicycle storage. (c) <i>School Halls</i> : see below.
Halls, Meeting Places, Places of Religious Worship	
Places of Assembly, Place of Public Worship	1 space per 6 seats or 1 space per 9m ² of N.F.A. (whichever is greater). A detailed parking submission may be required.
Theatres	1 per 5 seats
Health Care	
Medical Centres	3 per surgery; plus 1 per doctor; plus 1 per employee, or 4 spaces per 100m ² (whichever is the greater)
Hospitals / Nursing Home	1 space per 3 beds for visitors; plus 1 space per 2 staff/resident doctor; plus 1 space per 15 beds for visiting doctors; plus 1 space for ambulance (minimum)
Veterinary Hospital	1 space per 40m ² of G.F.A.; plus 1 space per doctor; plus 1 per employee
Health Consulting Room (Commercial Zone)	3 spaces per surgery; plus 1 space per employee
Industrial	
Automotive Uses (includes Auto-Electricians Workshop, Auto Mechanical and Body Repair Workshop, Car Repair Stations, Car Tyre Retail Outlets, Battery, Muffler Service, Panel Beaters, Spray Painters)	4 spaces per workbay or fitting bay or 1 space per 30m ² (whichever is greater)
Industry	1 space per 70m ² of G.F.A.

Industry where floor space of the office or showroom component exceeds 20% of the total floor space	1 space per 70m ² of G.F.A; plus 1 space per each 40m ² of office or showroom (any office floor space up to 20% of the total building area only requires 1 space per 70m ² of GFA).
Industrial Units	1 space per 50m ² of G.F.A; plus 1 space per unit, where each unit is less than 200m ² . Where each unit is greater than 200m ² , 1 space per 70m ² of G.F.A.
Open Yard Activity/Storage	1 space per 200m ² of open yard area
Hire Centres	1 space per 70m ² of G.F.A. of building; plus 1 space per 100m ² of open yard area
Road Transport Terminal, Container Depots, Bus Depots and the Like	1 space per car/truck/van/bus at the time of estimated peak vehicle accumulation on the site; plus 1 space per 2 staff
Warehouse or Distribution Centre Warehouse or distribution centre where floor space of the office component exceeds 20% of the total floor area	1 space per 200m ² of G.F.A. 1 space per 200m ² of GFA; plus 1 space per each 40m ² of office or showroom (any office floor space up to 20% of the total building area only requires 1 space per 200m ² of GFA)
<input type="checkbox"/> Other activities/uses not specifically mentioned or where no guidelines exist, the proposal will be assessed on the merits of the application and should be supported by a parking study.	

G1.4 Car parking requirements

1. Calculations for the number of car parking spaces will primarily be based on the gross floor area of the development, unless otherwise specified. Council will also give some consideration to other features of the development such as proposed maximum staffing levels, expected customer levels etc.
2. Where the calculation in respect of the level of parking required results in a fraction of a space, the requirement shall be taken to the next highest whole number, unless otherwise specified.
3. All car parking spaces are to be made available for the purposes of car parking and should not be used for storage purposes (including the storage of goods, waste receptacles, and in the case of vehicle hire and sales premises, motor vehicles).
4. The number of off-street car parking spaces required for a development must be calculated in accordance with the methodology demonstrated in the following hypothetical development example:

A combined industrial/warehouse development contains:

Industrial gfa = $1,500\text{m}^2 / 70 = 21.43$ (round up to 22)

Warehouse gfa = $1,050\text{m}^2 / 200 = 5.25$ (round up to 6).

Therefore this development would require 28 off-street car parking spaces.

G1.5 Contributions in lieu of providing off street parking

Explanation

Where a proposed development is located in a Business or Commercial zone within the area designated in red below, Council may, in accordance with the relevant S94 Contributions Plan, accept a cash contribution in lieu of the provision of car parking on the development site.

Performance criteria

1. The amount of any cash contribution to be accepted by Council in lieu of providing off street vehicle parking shall be as determined in accordance with Council's adopted fees and charges.
2. Any cash contributions received by Council in lieu of providing off street vehicle parking will be paid into the appropriate Trust Fund and the use of the funds will be restricted to the provision and upgrading of off street public vehicle parking.
3. Where Council determines that the provision of in-site parking is necessary or desirable, the council may refuse to accept a cash contribution and may direct that the necessary parking provision be made on site.



Part H

Residential Requirements



Greater Taree
CITY COUNCIL

PART H RESIDENTIAL REQUIREMENTS

Contents

H1	Residential development	3
H2	Primary residential requirements.....	4
H2.1	Site coverage and lot requirements	4
H2.2	Building setbacks.....	5
H2.3	Building height	7
H2.4	Car parking and access.....	9
H2.5	Private open space.....	11
H2.6	Solar access and overshadowing.....	13
H2.7	Acoustic and visual privacy	17
H2.8	Views	19
H2.9	Safety, security and entrances	20
H2.10	Front Fencing	21
H3	Controls for specific forms of residential accommodation....	23
H3.1	One and two storey single detached dwellings	24
H3.2	Secondary dwellings.....	26
H3.3	Dual occupancies	27
H3.4	Multi dwelling housing and residential flat buildings.....	29
H3.3	Shop Top housing	32
H3.6	Dwellings in R5 zones.....	34
H3.7	Manufactured Home Estates and Caravan Parks.....	35
H4	Ancillary development	38
H4.1	Ancillary structures and outbuildings	38

H1 Residential development

About this part:

The Greater Taree LGA features a range of residential zones which permit a variety of residential accommodation types and densities within existing urban areas and future release areas. This chapter establishes the objectives, principles and controls which will guide the design of residential development in the LGA.

Parts H2.1 to H2.10 apply to all forms of residential development. In addition Part H3 provides specific objectives and performance criteria for particular forms of residential development. Where an inconsistency arises between H2 and H3 provisions, those within H3 will prevail.

Applies to:

All land within the Greater Taree Local Government Area

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Objectives

- Encourage a variety and choice of housing types and sizes in localities;
- Ensure new housing integrates with the surrounding scale and character of the locality;
- Ensure that the impact of new housing on the amenity of surrounding properties is minimised.

H2 Primary residential requirements

H2.1 Site coverage and lot requirements

Explanation

Site coverage and floor space ratio are measures that assist in controlling building bulk. They are used in addition to height, setbacks and open space requirements to ensure dwellings are appropriately scaled to their site and surrounding development.

Controlling site coverage as well as floor space ratio ensures that adequate areas of external space are preserved to meet the requirements of the different forms of lifestyles implied by different forms of housing. It is also another way to ensure that established vegetation is preserved. Detached dwellings are likely to require proportionally more land around them, especially in areas such as Heritage Conservation Areas, where traditional sized lots are a major determinant of established levels of built form character and environmental amenity.

Objectives

The **floor space ratio** requirements are related to site coverage contained in Local Environmental Plan 2010 and should be read in conjunction with this section.

- Bulk and scale is compatible with the surrounding built forms and enhances the streetscape and public and private space;
- Development maximises permeable surfaces and maintains a balance between the built and unbuilt upon areas;
- Development provides for undeveloped areas that are of a suitable size, dimension and slope that will:
- Accommodate private outdoor area requirements that suit the anticipated needs of the occupants;
- Enhance privacy and views between housing, other buildings and the street (other sections);
- Actively facilitate on-site stormwater infiltration and harvesting for re-use (other sections);
- Incorporate suitable measures to minimise run off;
- Provide space for service functions, such as clothes drying.
- Ensure the density of a variety of building forms integrates with the character of residential environments.

Performance criteria

1. The maximum site coverage for all residential development is 65%.

H2.2 Building setbacks

Explanation

Applicants are also referred to the **Development Near Railway Corridors and Busy Roads – Interim Guideline; Environmental Criteria for Road Traffic Noise (DECCW); & Environmental Noise Management Manual (RTA)** for residential development adjoining rail corridors and busy roads.

New dwellings, alterations and additions should be integrated into the existing locality. This may be achieved through setbacks that influence the bulk, scale and siting of dwellings. Setbacks are required to ensure an adequate level of separation, public/private threshold, access, privacy, landscaping, fire protection and natural light between dwellings and should reflect the prevailing established subdivision and development pattern.

Objectives

- Integrate new dwellings, alterations and additions within the established streetscape character through consistency in street boundary setbacks;
- Ensure that new dwellings, dwelling alterations, additions and associated larger structures (i.e. garages and sheds) are set back from side and rear boundaries minimise the bulk, scale and amenity impacts on adjoining properties;
- Ensure there is adequate space on the site to provide for appropriate levels of landscaping, open space and privacy;
- Avoid undesirable characteristics, such as gun barrel developments, bulky forms and long walls;
- Optimise solar access and privacy for both the new development and existing surrounding development.

Setbacks to public streets are measured generally from the street boundary.

Performance criteria

Zero Lot Lines

1. Where subdivision development has created lots with appropriate building envelopes zero lot line development may be considered.
2. No section of wall built on a side or rear boundary must be longer than 7.5m without articulation.
3. For single storey development such walls must not exceed the greater of 50% of the length of the boundary or the length of any adjoining wall on the boundary. The percentage should be decreased to 30% for two storey or greater development.
4. Zero lot lines may be provided where it can be demonstrated that there is no unreasonable adverse impact on the privacy, amenity or solar access of adjoining properties.
5. An easement for support and maintenance of the zero lot line wall (and any services along the side of the dwelling) is to be provided on the adjoining property, except where a 400mm side boundary setback is provided. No overhanging eaves or services will be permitted within the easement; however roof gutters may project into the easement. No excavation is permitted within an easement for support and maintenance. All filling adjacent to an easement for support and maintenance shall be contained within the building footprint i.e. drop edge beams.

6. The S88B instrument relating to the support and maintenance easement is to be worded so that Council is removed from any dispute resolution process.
7. Zero lot line development must comply with the relevant provisions of the BCA.
8. No section of a wall built on a side boundary should be longer than 10m (i.e. an internal courtyard or light well will be required to achieve this standard). For single storey development, such walls should not exceed 50% of the length of the corresponding boundary. Two storey walls should not exceed 30% of the length of the corresponding boundary.
9. The location of zero lot line development shall have regard to dwelling design, allotment orientation, adjoining dwellings, landscape features, topography and proposed and existing infrastructure.
10. Access to the rear yard of zero lot line development must be provided via a larger side setback on the opposite side of the dwelling, or via a rear garage door provided as a drive through garage.

H2.3 Building height

Explanation

In addition to setbacks, building height is another means of managing bulk and scale of new development and to assist in integrating new development into established areas. This is particularly important in scenically significant areas and in the context of the rapidly increasing popularity of coastal living where the protection of existing levels of built character and amenity is both important and difficult.

Developments of this nature need to achieve a balance with the existing low-scale, intimate quality of established urban areas. The height and bulk of the new residential development must be designed sensitively so that the appearance of the building is compatible with the existing and desired future character of the locality.

One means of achieving this is to require designs that follow the slope of the land and minimise the height of foundation/underfloor wall height. A combination of limits on facade height, consistent roof pitches and maximum lengths of walls can achieve a desired scale of development.

Objectives

- Maintain a low-rise residential character throughout the Greater Taree suburban areas, especially in areas of predominantly detached housing;
- Ensure dwellings are sensitively designed (i.e. height and bulk) and consistent with their surroundings, especially in scenic locations;
- Maintain and enhance existing levels of neighbourhood amenity, especially in relation to privacy, solar access, views and apparent building bulk;
- Avoid adverse visual impact on streetscapes;
- Minimise impacts of multi dwelling housing where the local area consists substantially of detached housing;
- Ensure that an appropriate relationship between the floor levels of adjoining development is maintained.

Performance criteria

Permitted building heights are mapped in the Local Environmental Plan 2010.

1. The lowest floor level of all development shall not be greater than 1m above natural ground levels at any point.
2. In areas mapped as having a permitted building height of 8m or 8.5m, development shall contain not more than two storeys at any given point.
3. In areas mapped as having a permitted building height of 8m or 8.5m, the maximum height to the point of intersection of wall and eaves lines is to be 6m above the corresponding lowest storey at any point along the line of external walls.
4. In areas mapped as having a permitted building height of 11.5m, development shall contain not more than three storeys at any given point.

5. In areas mapped as having a permitted building height of 11.5m, the maximum height to the point of intersection of wall and eaves lines is to be 9m above the corresponding lowest storey at any point along the line of external walls.
6. Rooftop balconies, terraces and the like are to be considered as a storey.

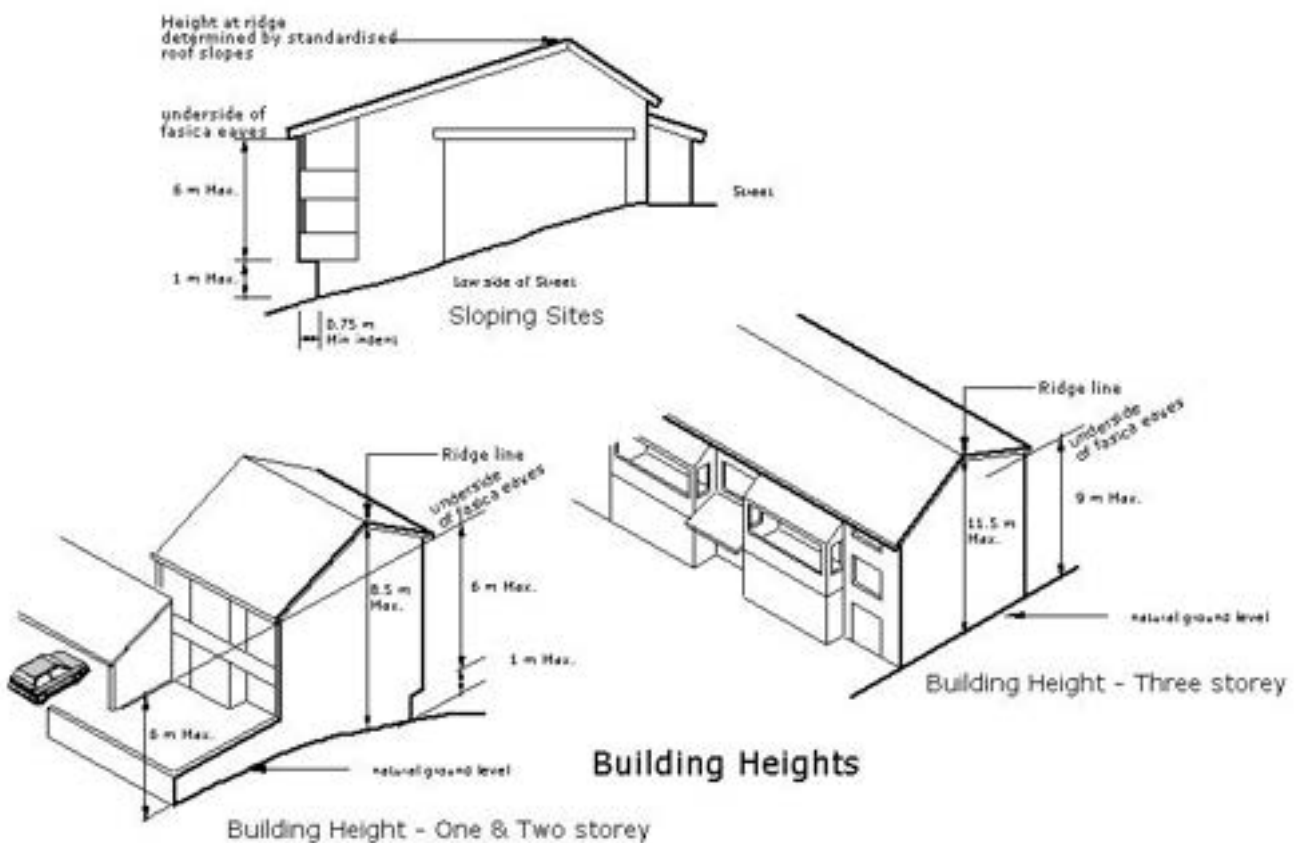


Figure 1 - Building heights

H2.4 Car parking and access

Explanation

The location, type and design of garages, carports and driveways can have a significant impact on the streetscape and building design. It is important that garaging is integrated and considered in the total design of the site and dwelling(s). It is desirable in all areas that garages do not dominate the streetscape.

Objectives

Applicants are also referred to the **AS 2890.1 Off Street Car Parking**

- Ensure that parking areas, access ways, driveways and streets allow safe appropriate and efficient vehicle movement and efficient connections to the existing street network, while minimising the loss of on-street public parking spaces;
- Provide adequate, secure and accessible on-site parking for residents and visitors;
- Ensure vehicular and pedestrian safety;
- Integrate access design with the overall building and landscape design;
- Minimise the visual and environmental impacts of on-street and off-street parking, through considered location of vehicle accesses and parking areas;
- Minimise the visual and acoustic impact of vehicle movements on the living areas of all dwellings;
- Ensure that car parking areas are contained in size and are surfaced appropriately to minimise the adverse effects of additional stormwater point loading;
- Ensure service vehicle access is met where necessary.

Performance criteria

All residential development

1. Garages and driveways do not dominate the street facade of the development.
2. Long straight driveways are to be avoided.
3. Hardstand areas should be minimised and, where soil conditions permit, be substantially constructed using semi-pervious materials to reduce water run-off and increase soil absorption.
4. Design for vehicle access and parking should in every instance take into account:
 - The size and number of dwellings proposed
 - The provision of on-site car parking that is easily accessible by visitors
 - The effect of sloping land in reducing parking opportunities
 - The safety of pedestrians, cyclists and vehicles
 - Efficient use of car spaces and access ways including manoeuvrability for vehicles between the street and the lot.
5. Driveways in all cases are to be at least 3m wide and include an internal radius of 4m at the point where there is a change in direction.

6. Special consideration will be given to particular site conditions such as existing vegetation, site drainage, steep access etc.
7. Where land has a frontage to a main road all development shall provide sufficient area on site to allow vehicles to enter and leave the site in a forward direction.

H2.5 Private open space

Explanation

Ideally, private open space should be provided which allows for a wide range of activities, such as outdoor dining facilities, recreation space, a small vegetable patch, a clothes-drying area, private landscape areas etc.

Provision of urban housing usually means that it will be necessary to have lesser areas of private open space than provided in traditional housing developments. Over time, the response to this market demand has been to provide various forms of urban housing with typical types of private open space – a private rear garden provided for a villa unit or townhouse and a balcony for the typical dwelling where access is at the first floor or higher level.

Objectives

- Provide sufficient open space for the reasonable needs of residents for privacy, access, outdoor activities, views, service functions and landscaping;
- Provide ground level private open space directly linked to the living areas of dwelling;
- Locate private open space so that it takes advantage of solar access, privacy from adjacent properties, outlook and views, existing plantings and existing landform;
- Ensure that all open spaces, private or communal are clearly defined and are useable, and help create a pleasant, safe and attractive living environment.

Performance criteria

Private Open Space
means an area
external to a building
(including an area of
land, terrace,
balcony, or deck)
that is used for
private outdoor
purposes ancillary to
the use of the
building.

1. Each dwelling shall be provided with quality, useable private open space (POS)
2. The POS area of each dwelling is to have a principal private open space (PPOS) directly connected to a living zone of the dwelling.
3. POS is to be no steeper than 1:10 gradient. On steeper sites open space is to be terraced to provide useable space. A front POS forward of the building line will only be considered where the allotment is predominantly north facing.
4. Sunlight must reach at least 50% of the POS of both the subject dwelling and of any adjoining dwelling, for not less than 3 hours between 9:00am and 3:00pm on 21 June. POS that has a southerly orientation (shaded by the dwelling and/or adjacent dwelling) may require an increase in its area to compensate for the shaded POS.
5. At least one principal living area of a dwelling must face predominantly north.
6. The POS shall be adequately screened for privacy from adjacent dwellings and passers-by.
7. Any dwellings which cannot be provided with private open space at ground level (i.e. residential flat buildings, shop top housing) shall instead be provided with a balcony.

8. Enclosing screen walls or fences should be designed to ensure privacy, for the dwelling and for adjoining communal open space or access ways and for other dwellings and their yards.
9. Part of the private open space should be capable of enabling an extension of the function of the dwelling for relaxation and recreation, and be directly accessible from the living area of a dwelling. Its location should take into account: outlook, natural features, continuity with open space and the location of adjoining dwellings. Its orientation should provide for maximum year round use.
10. Planting should not obscure or obstruct dwelling entries, adjoining public space, paths or streets in a way that reduces actual or perceived personal safety.
11. Proposed tree locations and species are to be selected so as not to adversely impact upon the amenity of adjoining properties or interfere with adjoining structures.

H2.6 Solar access and overshadowing

Explanation

The liveability of a dwelling is enhanced with natural sunlight, particularly to main living spaces and private open space areas, and particularly in the winter months. Access to natural light and ventilation reduces the need for a dwelling to rely on artificial lighting during daylight hours, heating in winter and cooling in summer. Natural sunlight to private open space areas provides the opportunity to use outdoor spaces year round for recreation and clothes drying.

Objectives

- Maximise sunlight access to the living areas and private open space of the dwelling;
- Minimise overshadowing of the living areas and private open space of adjoining properties;
- Minimise the need for artificial lighting during daylight hours and artificial heating and cooling.

Performance criteria

1. Shadow diagrams are to be submitted with all new development applications for 2 storeys or greater. The shadow diagrams are to be professionally prepared and based on a survey of the relevant site and the adjoining development / properties. Shadow diagrams are to take into consideration existing vegetation.
2. All new dwellings are to be designed to ensure that the predominant living spaces and the key private open space maximises northern or eastern sun.
3. The proposed development is to demonstrate that a minimum of 3 hours solar access is achieved between 9:00am and 3:00pm on 21 June to at least 50% of the private open space and to the principle living, dining, family and rumpus room(s) of the proposed dwelling and the adjoining dwellings/properties. Where this cannot be achieved, applicants are to demonstrate that the design maximises solar access.
4. Buildings must be sited and/or designed to avoid overshadowing on adjoining properties should be addressed, including, but not limited to, increasing setbacks, articulation, variations in roof forms and/or reducing building bulk or minimising height.

Note: It is acknowledged in urban areas it is often inevitable that certain development (ie 2 or more storeys) may result in some loss of solar access and increased overshadowing to adjacent properties, particularly for allotments with an east-west orientation.

Where a proposed development, due to the orientation of the allotments, cannot meet the required solar access, the proposal is to achieve a balance and minimise the extent of the potential impact through appropriate and well considered design.

Similarly, where the above requirements for solar access to the proposed dwelling cannot be demonstrated, Council may consider

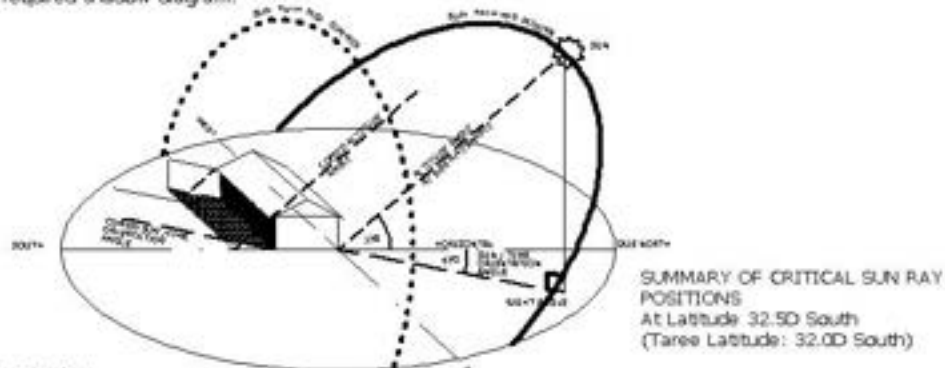
alternative sources of natural light, such as skylights, solar tubes and light spill from adjoining rooms and/or secondary windows.

Figure 2 - Solar and shadow worked example and diagram data for Taree

PREPARING A SHADOW DIAGRAM

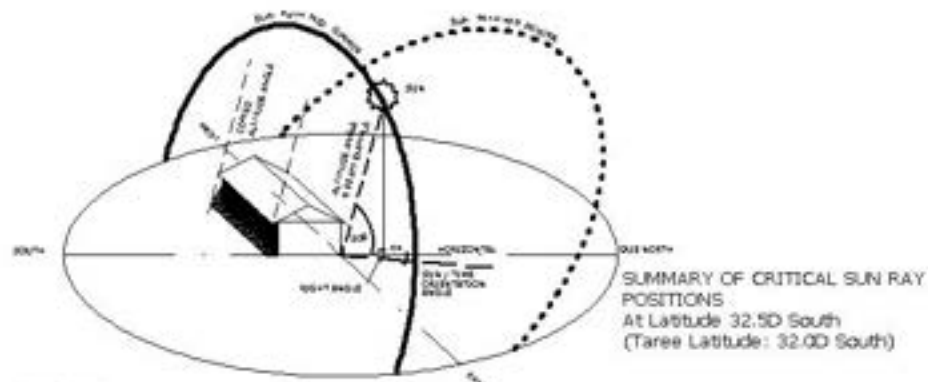
It is appropriate that a shadow diagram be prepared wherever development potentially impinges upon the availability of sunlight to existing development or where a development is likely to be affected by the shadows cast by adjacent development.

The following diagrams and charts are provided to assist in the preparation of any required shadow diagram.



Example 1
Indicating winter shadows, noting summer sun path shown dotted.
9.00 am on 21st June
Taree Latitude 32 South

EXAMPLE 1	TIME	VERTICAL ANGLE	HORIZONTAL ANGLE TO DUE EAST
WINTER 21 JUNE	9.00am	17	47
	Midday	30	90
	3.00pm	17	133

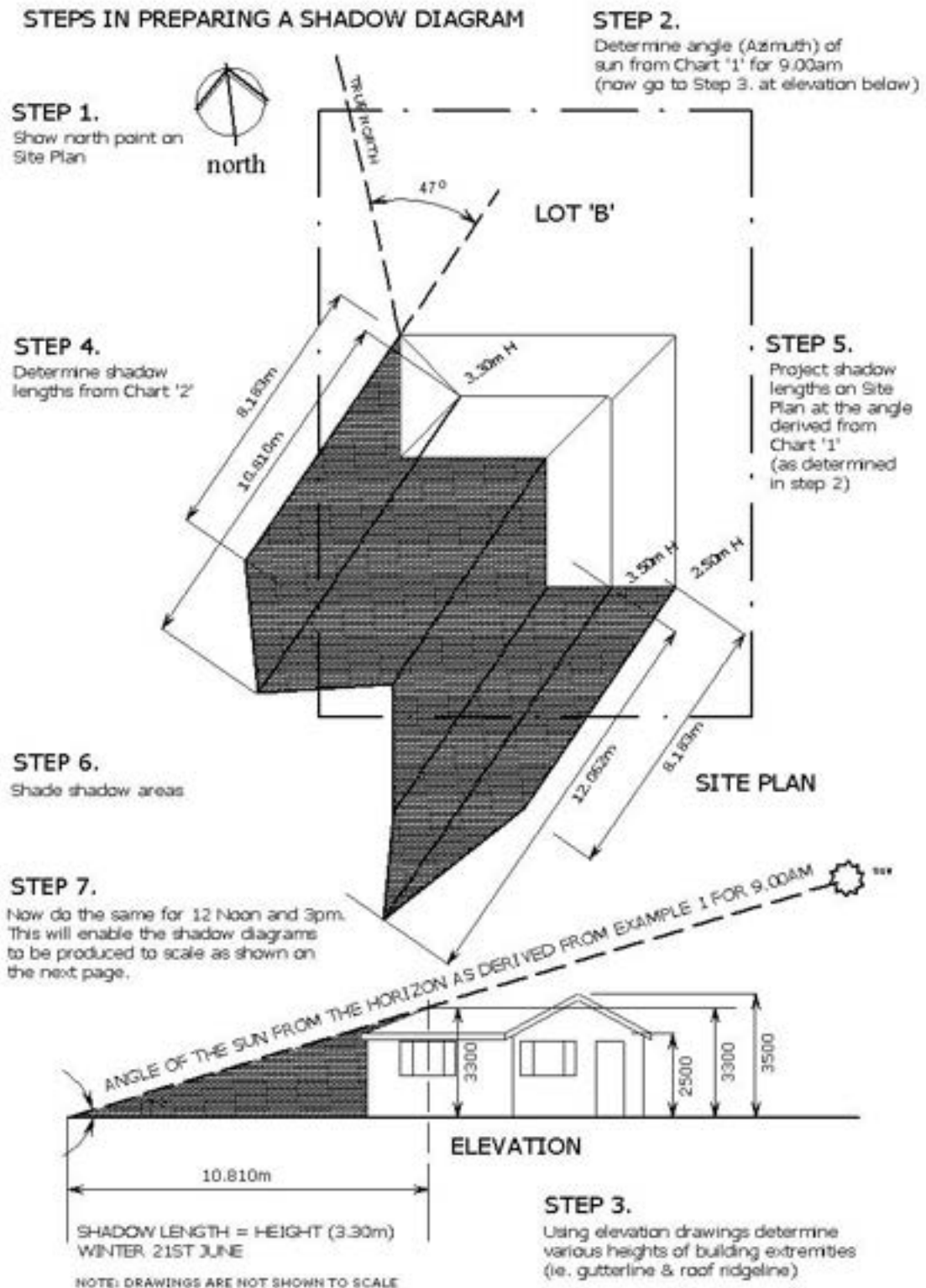


Example 2
Indicating summer shadows, noting winter sun path shown dotted.
9.00 am on 21st June
Taree Latitude 32 South

EXAMPLE 2	TIME	VERTICAL ANGLE	HORIZONTAL ANGLE TO DUE EAST
SUMMER 22 DECEMBER	9.00am	50	4
	Midday	80	90
	3.00pm	50	176

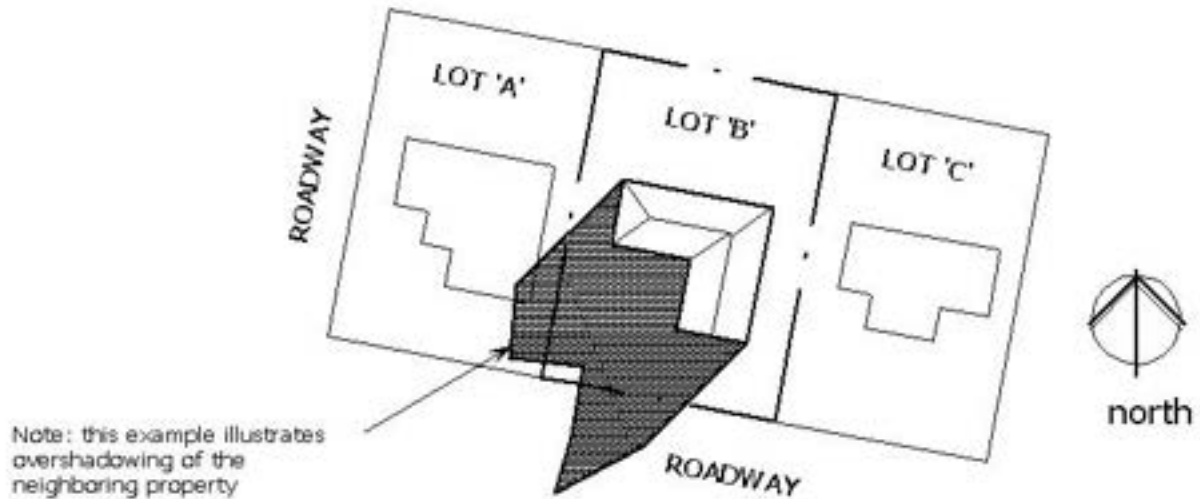
The sun angle charts in this example have been reproduced from information provided by the CSIRO. R.G. Peckall: Sunshine & Shade in Australia 5th edition (Melbourne CSIRO Publishing 1999).

Figure 3 - Solar and shadow worked example and diagram data for Taree

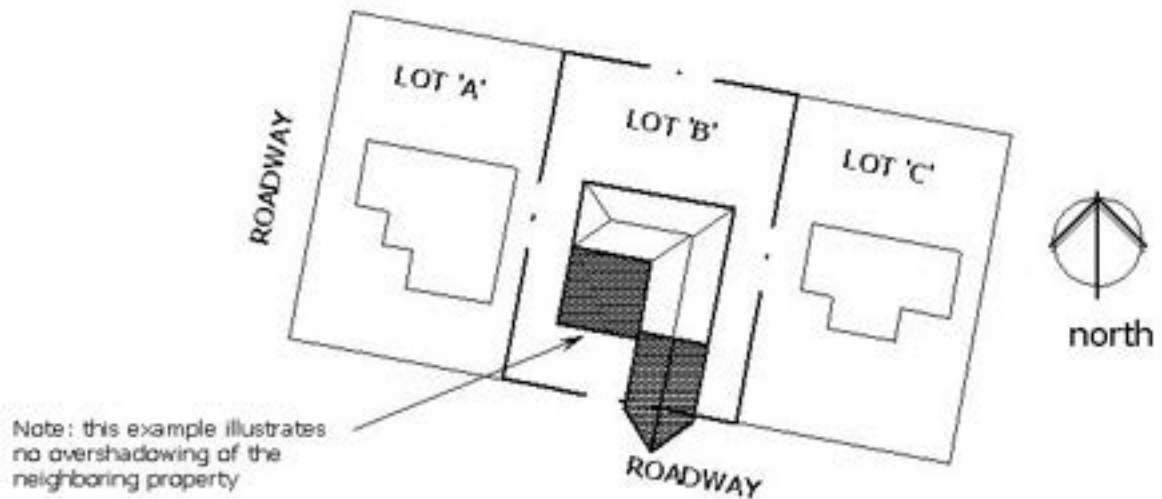


The sun angle charts in this example have been reproduced from information provided by the CSIRO: R.O Phillips: Sunshine & Shade in Australia 6th edition (Melbourne CSIRO Publishing 1999)

**EXAMPLE OF SHADOW DIAGRAMS
REQUIRED FOR A DEVELOPMENT APPLICATION**
For Latitude 32.5D South Longitude 47D East
(Taree Latitude: 32.0D South)
on 21st June (Winter Solstice)



TIME: 9.00am and 3.00pm
ANGLE OF THE SUN FROM TRUE NORTH: 47 DEGREES
ANGLE OF THE SUN FROM THE HORIZON: 17 DEGREES



TIME: 12 Noon
ANGLE OF THE SUN FROM TRUE NORTH: 90 DEGREES
ANGLE OF THE SUN FROM THE HORIZON: 30 DEGREES

The sun angle charts in this example have been reproduced from information provided by the CSIRO: S.O Phillips: Sunshine & Shade in Australasia 5th edition (Melbourne CSIRO Publishing 1999)

Figure 4 - Solar and shadow worked example and diagram data for Taree

H2.7 Acoustic and visual privacy

Explanation

Sensitive design of dwellings can minimise the intrusion of noise and overlooking impacts into new dwellings and adjoining dwellings. Noise and overlooking impacts may also be further minimised through landscaping and screening treatments external to dwellings, while recognising that it is neither possible or desirable to achieve total privacy in an urban environment, and that a degree of visual and social interaction between neighbours contributes to a safe and healthy environment.

As it is difficult to make any major building changes to achieve acoustic privacy once construction is complete, particular attention should be given at the design stage to siting, building and room layout, window and wall location and design, and to the selection of construction materials and methods.

Objectives

- Ensure the siting and design of dwellings, including terraces and balconies, minimises the overlooking of adjoining properties will have a reasonable level of privacy to their dwelling and private open space area;
- Ensure the siting and design of dwellings contains noise within the dwelling and outdoor areas without unreasonable transmission to adjoining dwellings;
- Ensure that dwellings close to noise sources, such as roads, railway or industry, are sited and designed to provide a comfortable living and sleeping environment and isolate adverse impacts from noise sources;
- Provide appropriate separation between dwellings to ensure acceptable levels of acoustic privacy between them;
- Ensure an adequate degree of visual privacy for residents of all forms of housing, with additional care being required in the design of any attached dwellings.

Performance criteria

1. Windows and balconies should be designed and oriented to minimise overlooking of main living areas and private open space. Effective design is preferred to the use of screening devices, high sills or obscured glass.
2. Dwellings are to be sited and designed to limit the potential for noise transmission to the living and sleeping areas of adjacent dwellings.
3. Shared common walls and floors between dwellings must be constructed in accordance with the noise transmission and insulation requirements of the Building Code of Australia.
4. Where landscape plantings can assist in visual privacy, evergreens must be used and they must be of a size that will visually screen the noise source within 3 years.

5. Careful consideration should be given to the location of noise generating activities/items such as air-conditioning units, swimming pool equipment, recreation areas driveways and car spaces to minimise the impact on the amenity of adjoining properties.
6. A minimum line-of-sight separation of 3m is required between parking areas/streets and all bedroom windows.
7. Where any wall openings of adjacent dwellings are opposite each other, a minimum separation of 3m is required.
8. All opposing windows and doors on adjacent lots must be offset
9. A minimum of 9m is required between the windows of habitable rooms of facing dwellings that abut a public or communal area. This distance should be increased to 12m for windows above first-floor level. Direct views between living area windows of adjacent dwellings must be screened or obscured where:
 - Ground and first floor windows are within an area described by taking a 9m radius from any part of the window of the adjacent dwellings. An area so defined is described as a privacy sensitive zone.
 - Other floor windows are within a privacy sensitive zone described by a 12m radius.
10. Overlooking of ground level private open spaces, from upper levels is to be avoided, for example through the use of setbacks, level changes, landscaping and/or pergolas.
11. Overlooking between units is to be avoided, for example through dividing fins, louvers and other design detail.
12. The windows and doors of proposed dwellings that provide direct view into the living area/bedroom windows of an adjoining dwelling should:
 - Be located out of alignment with the windows of adjoining dwellings, or
 - Have fixed obscure glazing to a minimum height of 1.7m above floor level, or
 - Use another form of screening to the satisfaction of Council.
13. The outlook from a proposed dwelling into the private open space of another dwelling does not require screening where:
 - Windows are in bathrooms, toilets, laundries, storage rooms or other non habitable rooms.
 - Windows have a minimum sill height of 1.5m above floor level or translucent glazing to a minimum height of 1.5m above floor level.
 - Windows and balconies of upper level dwellings are purpose-designed to prevent overlooking of more than 50% of the private open space of a low-level or neighbouring dwelling.
14. A roof top balcony, terrace and the like on residential developments and outbuildings is not suitable where it compromises privacy and amenity.

H2.8 Views

Explanation

Maintaining views from dwellings and open space areas forms the basis of the principles of view sharing. Proposals should aim to achieve view sharing and minimise view loss through appropriate and well considered design.

Objectives

- Avoid compromising available quality views;
- Minimise view loss from adjoining or nearby properties and public places;
- Avoid development of a form which will substantially compromise views available from public thoroughfares and from private living areas;
- Maintain view sharing for existing and future residents.

Performance criteria

1. Provision of a view analysis as a component of a site analysis to indicate that a proposed development reflects the desirability of protecting known views and the principles of view sharing. The view analysis of surrounding development is required to indicate the position of the proposal on its site, the location of adjoining buildings and the degree of view loss, if any, resulting from the proposal.
2. Council may require the erection of a height profile structure certified by a registered surveyor on the site prior to determining an application.

H2.9 Safety, security and entrances

Explanation

Good design incorporates elements that contribute to the actual and perceived safety and security of residents and visitors.

It is good design practice for the front entrance of a dwelling (or other form of residential building) to be prominently sited, with the building frontage facing the street boundary, rather than away from it.

Objectives

- Ensure a safe physical environment by promoting crime prevention through design;
- Ensure that siting and design of dwellings, buildings and spaces contributes to the actual and perceived personal and property safety of residents and visitors;
- Ensure that the front entrance of each dwelling is clearly defined and visible to pedestrians and emergency services personnel from the street that it faces;
- Provide a consistent element of facade modulation as a means of contributing to streetscape amenity;
- Provide an area of sheltered transitional spaces for resident and visitor between the public street and the private dwelling.

Performance criteria

All residential development

1. Buildings are designed to face the street, with at least one habitable room window which can overlook streets and other public areas to provide casual surveillance of the public domain.
2. The site layout should ensure that the front entrance to a dwelling is easily identified by visitors and emergency services through design and conspicuous house numbering and that adequate privacy is maintained between individual entrances.
3. Separate and covered pedestrian entry should be provided to each dwelling. In the case of dual occupancy, entries should be either oriented to the street and/or separated from driveways and communal areas by a transition zone (e.g. a porch or front verandah).
4. Front fences, garages and landscaping elements are to be designed not to obstruct casual surveillance to and from the dwelling to permit safe access by residents and visitors to the dwelling.
5. Lighting to the exterior is to be provided to enhance the amenity and security around the dwelling, however, light spill must not adversely impact on adjoining properties.
6. Buildings should be detailed or articulated in a manner that identifies the entry and expresses individual dwellings to the street frontage where possible.

H2.10 Front Fencing

Explanation

Applicants are advised to refer to the **Exempt and Complying Schedules in Local Environmental Plan (LEP) 2010** in addition to this section as consent may not be required.

Front fences define boundaries between public and private spaces, provide a safe area for children to play and offer some acoustic and visual privacy. However, front fences and walls can also unduly dominate a street and their design should be well considered and integrated with the streetscape and built character.

The traditional Australian approach to gardens is for the front yard to function as a semi-public space, performing a variety of physical and cultural roles. This semi-public role conflicts with the desire generated in many new medium and higher density urban housing developments for the private open space to the street to be enclosed.

The extent and height of front fencing should generally be kept to a minimum. A more attractive streetscape may be created by having buildings set within a semi-public landscape rather than behind high fences.

Objectives

Specific and additional controls apply to **heritage items and conservation areas in Part F of this DCP**.

- Ensure fencing does not dominate the streetscape and that it is integrated with, and positively contributes to, the character of the streetscape and the locality;
- Ensure front fencing is integrated with the landscaping and building design;
- Ensure a balance of privacy, safety and security for occupants of new and existing dwellings, whilst encouraging the opportunities for visual and social interaction and connection with the street;
- Ensure that fences and walls are designed to help define the boundary between public and private spaces and to assist in highlighting the property's pedestrian entry point.

Performance criteria

Additional controls apply to development within the **foreshore building line** as described in the current Local Environmental Plan (LEP).

1. Fencing should not block views from a dwelling towards the street or similarly obscure the visibility of the front entrance of a dwelling.
2. Where front boundary fencing is required, it is to be no taller than 900mm if solid and no taller than 1.5m if the fence has openings which make it at least 50% transparent. Fence materials and detail design is to be consistent with those of the character of fencing in the immediate locality.
3. The distance between modulating elements (indentations, posts, or engaged piers), should not be greater than 2.5m.
4. Front fences must not exceed 10m in length without some articulation or detailing to provide visual interest, i.e. fence posts, engaged piers etc.
5. In locations (such as Crowdy Head), where front fences are not common, front boundary definition shall be achieved by hedging or other methods common to the local area.
6. All fencing behind the line of the dwelling/building façade, side and rear fences, may be a maximum of 1.8m.

7. Side fences which project forward of the front building line should step down to the adjoining front fence.
8. Expansive flat and blank surfaces to street frontages are to be minimised to reduce the opportunity for graffiti.

Private Open Space Fencing

1. Where front fencing is utilised to provide screening to private open space it must be no higher than 1.5m if located on the front boundary. If proposed higher than 1.5m the fence must be located at least 1.2m from the property boundary. Private open space fencing must not exceed 1.8m.
2. Private open space fencing must demonstrate its adequacy for providing privacy to the development. Design treatments such as articulation, panelling, hedging, etc can be engaged to provide both privacy and contribute to the visual amenity of the streetscape.

H3 Controls for specific forms of residential accommodation

This section provides additional detailed controls that apply to specific forms of residential accommodation including:

- one and two storey single detached dwellings,
- secondary dwellings,
- dual occupancies,
- multi dwelling housing,
- residential flat buildings,
- shop top housing.

This section must be read in conjunction with the controls and provisions contained in Parts H2 and H3 and all other relevant chapters of the DCP. If there is no specific control listed in the subsections below, the general residential controls contained in Part H2 will apply.

H3.1 One and two storey single detached dwellings

Performance criteria

Setbacks

1. The minimum primary street boundary setback is 5m. However, where adjacent residential development is closer to the front boundary, Council may consider a setback equal to that of whichever neighbouring dwelling/building most closely meets the required setback. Where adjacent development is set further back than the minimum requirement, Council may require a greater setback than the minimum permissible.
2. The minimum required setback from a secondary frontage (on corner allotments) is 3m. Where adjacent residential development is closer to the boundary, Council may consider a reduced setback. The minimum setback in these locations must be 2m. Likewise, where adjacent development is set further back, Council may require a greater setback than the minimum permitted.
3. The garage door (regardless of the frontage of the site) shall achieve a minimum setback of 5m from the relevant street frontage.
4. Side and rear setbacks are to be a minimum of 900mm for single storey development.
5. Where the rear property boundary adjoins a public reserve, a minimum 3m building setback is required.
6. Two storey developments are to be set back a minimum of 1600mm from side and rear boundaries.
7. Where site conditions warrant and provided that there is no unreasonable adverse impact on the privacy or solar access of adjoining properties, and is consistent with the existing streetscape of the locality, Council may allow side or rear walls without windows to be built to the boundary (zero lot line).
8. Projections permitted into setback areas include: eaves, sun-hoods and vertical sun screens, gutters, downpipes, flues, light fittings, electricity or gas meters and aerials. These can project 450mm (where the setback is 900mm) or to the boundary, whichever is less.

Car parking

1. Car parking is to be provided at the rate of 2 off-street parking spaces behind the Council specified building line.
2. The combined garage and driveway space for each dwelling must be long/wide enough to accommodate two vehicles behind the street boundary.
3. With the exception of corner lots, vehicular access to all residential developments is to be achieved by way of a single driveway crossing.

Private Open Space

1. A minimum of 80m² of private open space directly linked to the principal living areas, with minimum dimensions of 6m x 4m is to be provided.
2. Where Private Open Space is to be terraced one (1) level must wholly contain the 6m x 4m area. This area must be located adjacent to the dwelling living rooms.

H3.2 Secondary dwellings

Explanation

Secondary dwellings are a type of residential development commonly referred to as granny flats.

Objectives

- Provide unique dwelling types that satisfy a social need;
- Contribute to the availability of affordable housing;
- Promote innovative housing solutions that are compatible with the surrounding residential environment.

Performance criteria

See Greater
Taree LEP
clause 5.4 (9)

1. Secondary dwellings shall be designed to complement the design of the principal dwelling and be subservient to the principal dwelling in terms of visual bulk and scale. Provision must be made for clothes drying facilities in a location with adequate solar access.

Note: Strata or Torrens title subdivision of secondary dwellings is not permitted.

H3.3 Dual occupancies

Explanation

A dual occupancy is generally referred to as the erection of two dwellings on land in either a detached or attached layout.

A detached dual occupancy involves the erection of two free-standing dwellings or the erection of a second free-standing dwelling on a single allotment of land.

An attached dual occupancy involves the erection of two dwellings, or the modification of an existing dwelling to create a second dwelling, under a common roof on a single allotment of land.'

Objectives

- Ensure dual occupancies and semi-detached dwellings are compatible with existing housing and do not adversely affect the local environment or the amenity of adjacent residents;
- Provide housing choice for the residents of the Greater Taree City Council LGA.

Performance Criteria

Minimum lot size

1. Development for the purposes of dual occupancy requires a minimum land size of 750m² excluding the area of any battle-axe handle

Setbacks

1. The minimum primary frontage setback is 5m. However, where adjacent residential development is closer to the front boundary, Council may consider a setback equal to that of whichever neighbouring dwelling/building most closely meets the requested setback. Where adjacent development is set further back than the minimum requirement, Council may require a greater setback than the minimum permissible.
2. The minimum required setback from a secondary frontage (on corner allotments) is 3m. Where adjacent residential development is closer to the boundary, Council may consider a reduced setback. The minimum setback in these locations must be 2m. Likewise, where adjacent development is set further back, Council may require a greater setback than the minimum permitted.
3. Side and rear setbacks are to be a minimum of 900mm for single storey development.
4. Second storey development is to be set back a minimum of 1600mm from side and rear boundaries.
5. Where the rear property boundary adjoins a public reserve, a minimum 3m building setback is required, with the exception of in-ground pools. In these cases, a setback of 900mm is required

6. Projections permitted into setback areas include: eaves, sun-hoods and vertical sun screens, gutters, downpipes, flues, light fittings, electricity or gas meters and aerials. These can project 450mm (where the setback is 900mm) or to the boundary, whichever is less.

Car parking

1. Car parking is to be provided on-site at the rate of:
 - 1 space for each 1 and 2 bedroom dwelling
 - 2 spaces for each 3 or more bedroom dwelling
2. Garages and carports should not occupy more than 50% of the site frontage and where dwellings are side by side facing the street, are to be flanked by one principal habitable room facing the street.
Departure from this requirement may only be permitted for allotments with a width of less than 15.5m, where it can be demonstrated that:
 - The extent of the departure is very minor and does not adversely impact on the streetscape, safety and security of the dwellings or the sense of address for the dwellings.
3. Consideration may be given to permitting reversing movements from dwellings on lots not having frontage to a main road only where a garage faces the street and there is a maximum reversing distance of 10m to the carriageway.
4. Dual Occupancies on corner lots must have a maximum of one (1) driveway to each frontage.

Private open space

1. A minimum of 80m² of private open space is to be provided to each dwelling.
2. For the purpose of calculating the 80m² all open space is to have a minimum dimension of 4m, contain a level area with dimensions of 6m x 4m, and is to be directly accessible from the living area of each dwelling. Where areas have a dimension less than 4m it will not be included in the 80m² requirements.
3. Part of the open space may be provided in front of the building line.
4. Where private open space is to be terraced one (1) level must wholly contain the 6m x 4m area. This area must be located adjacent to the dwelling living rooms.

H3.4 Multi dwelling housing and residential flat buildings

Objectives

- Encourage high quality residential developments which feature a high standard of urban design and provide a high level of amenity for residents;
- Ensure that development sites have sufficient site area to accommodate appropriate setbacks and open space areas, including areas for deep soil planting and natural site drainage.

Performance criteria

Site Coverage

1. Development for the purposes of multi dwelling housing requires a minimum land size of 1,000m².

Setbacks

1. The minimum front street boundary setback is 7m. Where adjacent multi dwelling housing development is closer to the front boundary, the setback may be similar to that of adjacent development. Likewise, where adjacent development is set further back, Council may require a greater setback than the minimum otherwise permitted.
2. The minimum side and rear required setback is calculated using the formula: $2.25m + H/4$ - Where H = the height of the ceiling of the topmost storey above any point along the line indicating the unexcavated level of the land.

Note: Where minimum setbacks are observed and it can be demonstrated that positive benefits will result in terms of:

- reducing the bulk of buildings;
- improving the privacy of adjacent properties and
- provided that there are no adverse environmental effects (such as overshadowing),

the setback can be reduced by 50% for up to half the length of the wall or a maximum of 7.5m. This concession is applicable if the remaining portion of the wall is setback so that the area of open space between the wall and the boundary remains the same as that set by the distance calculated from supporting documentation such as shadow diagrams and privacy impact analyses.

3. Where the rear property boundary adjoins a public reserve, a minimum 3m building setback is required, with the exception of in-ground pools and pathways that provide access to public reserves. In these cases, a setback of 900mm is required.
4. A minimum setback of 3m is permitted from the carriageway edge for multi dwellings fronting private streets.

5. Projections permitted into setback areas include: eaves, sunhoods and vertical sun screens, gutters, downpipes, flues, light fittings, electricity or gas meters and aerials. These can project 600mm or $\frac{1}{4}$ of the setback distance whichever is less.

Car parking and access

1. Parking in the form of garages or carports is to be provided on site at the rate of:
 - 1 space for each 1 and 2 bedroom dwelling;
 - 2 spaces for each 3 or more bedroom dwelling.Visitor parking is to be provided onsite at the rate of 1 space per 3 dwellings.
2. Where amalgamation of lots is proposed and vehicular access points to the street are reduced, visitor spaces may be located on street at the rate of 1 vehicle for each access deleted, provided the vehicle spaces are located in front of the boundaries of the development site.
3. Stacked parking will be permitted for this type of residential development where the stack space does not obstruct traffic movements. All vehicles must be able to manoeuvre on site with a single reverse movement and enter and leave the site in a forward direction with safety.
4. Consideration may be given to permitting reversing movements from dwellings on lots not having frontage to a main road only where a garage faces the street and there is a maximum reversing distance of 10m to the carriageway.
5. Entrance driveways are to be designed to the minimum width necessary to serve any development and allow safe forward in and forward out movement. For developments servicing six or more dwellings, the entrance driveway across the footpath to the building setback is to be a minimum of 5m wide.

Private open space

1. The useable private open space per ground level dwelling should not total less than 35m², where:
 - The minimum dimension in any direction is 4m.
 - The open space contains an area not less than 16m² with a minimum dimension of 4m and is directly accessible from the living room of the dwelling.
2. For dwellings above ground level, private open space should be provided in the form of a balcony, where:
 - The balcony has a minimum area of 8m² and a minimum dimension of 2m in any direction.
 - The balcony has direct access from the main living area of the dwelling.
3. Secondary balconies with direct access to a bedroom may be permitted.

Storage

1. In addition to normal kitchen, linen and bedroom storage, accessible storage is to be provided at the following rates:
 - Studio, 1 and 2 bedroom apartments – 6m³,
 - 3 bedroom or greater apartments – 8m³.

Note: At least half of this requirement is to be provided within the apartment. The remainder may be provided in a safe and secure area remote from the apartment, such as basement storage or adjacent to the car parking space.

H3.3 Shop Top housing

Explanation

Shop-top describes a building type with residential dwellings above commercial, in most cases retail space. Generally this building type occurs on land zoned for commercial purposes.

Shop-top comprises of either two or three storeys with the commercial component occupying the whole of the ground level of the building and in some cases the first level as well.

The challenge for shop-top is to ensure that the residential component of the building does not preclude quality commercial space nor stifle the growth and development of the place as a commercial and civic centre. The primary and overriding purpose of land within centres is to provide for the current employment, commercial, entertainment and civic needs of the community therefore development is to safeguard the flexibility and growth opportunities of these uses. As such residential uses are of secondary importance to the commercial component of this building type and are to result in economically viable commercial spaces for the occupants and future owners in the immediate and longer term.

Objectives

- Encourage shop top housing which provides the occupants with a high level of amenity whilst addressing issues associated with the interface between residential and business/commercial land uses;
- Provide a building form that complements commercial uses;
- Provide more compact housing in proximity to centres;
- Create an urban building form and strong built edge along the street;
- Define the street space.

Specific and additional controls apply to **heritage items and conservation areas in Part F of this DCP.**

Performance criteria

Access and entries

1. The proposed development should:
 - minimise vehicular and pedestrian entry and exit points to the site,
 - provide a defined and well-lit pedestrian safe route.
2. Provide a separate and well-defined entry point(s) to the shop top housing dwellings from the primary street frontage.

Building height, bulk and scale

1. The maximum height of buildings is established by Greater Taree LEP 2010 and the associated Height of Buildings Maps.

2. Shop top housing may be designed with flat roof forms in order to maximise the number of storeys within a building. However, such buildings must feature a high level of architectural design and incorporate appropriate treatments to minimise the visual bulk and scale of the building.
3. For shop top housing, basement car parks that do not exceed more than 1m above natural ground level are not considered to be a storey.

Image and legibility

1. The proposed development should:
 - blend in with its surroundings and/or be in context with the area,
 - minimise intrusion on adjacent land uses e.g. noise, overshadowing, car parking overflow, vehicles reversing onto public roads,
 - create visual interest internally and with its relationship within the streetscape via building design, materials and colour scheme.

Car parking

1. Car parking shall be provided in accordance with Part G of this DCP.
2. Basement car parking areas shall include adequate lighting, ventilation and access control/security. To enhance the effectiveness of the lighting system, the walls and ceiling of basement car parking areas shall be painted white.
3. The basement car parking area in a mixed use development which includes shop top housing must provide a separate car parking area for the residents and visitors to the shop top housing. The resident and visitor car parking area must have controlled access via electronic and mechanical means to eliminate parking conflict between residents/visitors and the employees and customers of the business/commercial component of the development.
4. Traffic calming measures should be provided to ensure a safer vehicle and pedestrian environment where required.
5. Driveways, manoeuvring areas, parking areas and garages are to be located away from bedrooms.

Servicing

1. Each dwelling shall be provided with a separate secure storage space of 8m³. This space is to be provided exclusively for storage purposes and must be provided in addition to any garage space.

Security

1. The proposed development should be designed to comply with Council's *Safer by Design* Guidelines.

H3.6 Dwellings in R5 zones

Explanation

Residential development in the R5 zone is generally considered to be of a rural residential nature. It has the potential to create conflict with other land uses if buildings are inappropriately sited and designed. All development should take into account the inherent character of a locality and be responsive to that character and the local landscape qualities.

Objectives

- Ensure that development does not detract from the landscape, scenic quality, heritage value, nature or conservation significance of the area;
- Provide separation between residential uses and noise generating sources;
- Provide buffers between residential buildings and land uses to minimise the potential for land use conflict;
- Ensure that external finishes used have minimal detrimental impact on the visual amenity of an area;
- Encourage consideration of all the components of development such as fencing, outbuildings, driveways and landscaping in the design of the proposed development.

Specific and additional controls apply to **heritage items and conservation areas in Part F of this DCP.**

Performance criteria

Setbacks

1. The minimum front street boundary setback is 10m.
2. Side and rear setbacks are to be a minimum of 5m.
3. Council may consider reducing the above setback requirements where it can be demonstrated that it is necessary because of topography or other feature including setbacks required for bushfire planning purposes.
4. The reduced setback must not create amenity impacts for adjoining properties.

Car parking and access

1. No maximum permissible length applies to driveways accessing large lot residential.

Dual occupancies (attached)

1. The development must have the appearance of a single dwelling when viewed from any public place.
2. Dwellings must be constructed so that they are attached under the same roofline and have the general appearance of a dwelling house when viewed from the primary street frontage. Structures such as carports and skillion roofs, pergolas, covered awnings and the like are not acceptable as a mode of attachment.
3. Both dwellings must be constructed of similar materials and colours.

H3.7 Manufactured Home Estates and Caravan Parks

Explanation

The Part only applies to manufactured home estates or caravan parks, where

- on a single development site of one hectare or greater; and
- manufactured homes are to be installed for resident or visitor accommodation.

The objectives and controls within this section of the DCP are to be read in conjunction with the provisions and requirements of:

State Environmental Planning Policy No 21 – Caravan Parks (or as amended)

State Environmental Planning Policy No 36 - Manufactured Home Estates (or as amended)

Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005

Objectives

- Encourage high quality developments which feature a high standard of urban design and provide a high level of amenity for residents;
- Ensure sufficient site area is provided to accommodate communal and private open space areas, including areas for deep soil planting and natural site drainage;
- Ensure the development layout and design, streetscape treatment and built form demonstrate visual compatibility and cohesion with the surrounding neighbourhood; and
- Ensure that adequate infrastructure and community/support services are available to meet the needs of residents

Development Controls

1. Setbacks and Separation

- a) Site layouts for manufactured homes shall be designed to provide for articulation and diversity along street frontages.
- b) Buildings and manufactured homes are to be grouped/clustered to provide a high level of pedestrian permeability. Each group is to be separated by an access road or a pedestrian path, with communal landscaped areas.
- c) The setbacks provided between buildings and manufactured homes, are to be designed to ensure acoustic and visual privacy to residents.
- d) The property boundary setbacks to buildings and manufactured homes are to be maximised, to provide visual separation from the street and adjoining properties.
- e) Setbacks shall be sufficient to avoid any land use conflicts with adjoining zones and uses.

2. Landscaping

- a) Setbacks to manufactured homes are to be screened, fenced and landscaped to ensure an attractive streetscape, to both internal and public roads. Setbacks to public roads are not to be used for administrative buildings, community buildings/amenities, camping sites or parking facilities.
 - b) Deep soil planting and semi-mature street trees are to be provided in the property boundary setbacks and between groups/clusters of manufactured homes, to provide visual buffers and shaded areas in communal open spaces.
- 3. Building Design of Manufactured Homes
 - a) Building articulation and habitable rooms in dwellings must enable passive surveillance of access roads.
 - b) Building materials and colour schemes must be selected to demonstrate compatibility with surrounding residential development.
 - c) Building designs on corner lots should avoid blank walls and include design features that provide visual interest to, and passive surveillance of, access roads.
- 4. Visitor Parking
 - a) Visitor parking is required to be accessible at all times by residents and visitors to the development.
 - b) Where the number of dwellings and/or sites is 100 or fewer, a centralised visitor car parking facility is to be provided.
 - c) Where the number of manufactured homes and/or sites is more than 100, visitor parking is to be spread throughout the development site. A minimum of 4 spaces and maximum of 10 spaces per parking facility are to be provided in any location.
- 5. Caravan and Boat Storage
 - a) Where a separate parking facility is to be provided for caravan and boat storage, the facility is to incorporate a wash down facility.
 - b) The siting, design and security of this facility is to have regard to the need to minimise the opportunity for crime.
- 6. Services and Infrastructure
 - a) The entrance of a development with more than 25% long-term/permanent occupancy sites, is to be within 400m of a bus stop serviced with daily bus services or provided with a private daily bus service for residents.
 - b) Any onsite administration, retail, community facilities and amenity buildings are to be accessible to all residents.
 - c) Garbage facilities on the site are to be designed to be accessible to all residents and provided with screening from manufactured homes and long-term/permanent occupancy sites, adjoining properties and public areas.

Additional Lodgement Requirements

- 1. A Visual Impact Assessment which addresses:
 - a) The landscape and visual context of the locality;
 - b) The potential impact of the development, in particular, when viewed from surrounding residential development, public spaces and/or facilities; and

- c) Any relevant 'local character' statements for the town, village or locality.

The Visual Impact Assessment is to include illustrations, photomontages and/or artists' impressions.

2. An Access Audit that provides details on the following:
 - a) Gradients, widths and lengths of pedestrian pathways; and
 - b) Access to and within administrative and communal buildings and structures.
3. A Social Impact Assessment which considers:
 - a) An assessment of how the development location and design addresses the requirements of residents; and
 - b) Connectivity between the development site, surrounding neighbourhood and community.
4. A Traffic assessment which considers the impact of traffic generated by the development upon the existing road network.
Note: dependent upon the scale of the development relative to its location, a full Traffic Impact Assessment may be required.
5. A water and sewer servicing plan detailing:
 - a) The capacity of the reticulated water and sewerage systems in the locality; and
 - b) Details of any additional infrastructure (on and off-site) required to connect to existing systems and/or provide sufficient capacity to cater for the increase in demand.
6. To enable a visual impact assessment for the development of the manufactured home estate provide:
 - a) a minimum of five manufactured home designs, including at least one design appropriate for corner blocks (where relevant); and
 - b) information on the design and location of any centralised mail facility for residents.
7. To enable a visual impact assessment for the development of the caravan park where proposing manufactured homes in the park:
 - a) identify sites where manufactured homes are proposed; and
 - b) provide a minimum of five manufactured home designs, including at least one design appropriate for corner blocks (where relevant).
8. Any caravan park established on land in a rural or environmental zone may not accommodate more than 25% of sites for use as long term sites.
9. Caravan parks and manufactured home estates require a community plan to be lodged that identifies the location and nature of occupancy, of all resident and visitor sites.
10. Caravan parks and manufactured home estates may also be required (depending on scale and location) to provide an Economic Impact Assessment which considers:
 - a) the potential impact on local businesses, services and facilities within the town, village and/or locality; and
 - b) the potential impact on local businesses, services and facilities within the MidCoast region.
11. All applications for caravan parks and manufactured home estates are required to demonstrate how they meet the *Crime Prevention Through Environmental Design* (CPTED) principles.

H4 Ancillary development

H4.1 Ancillary structures and outbuildings

Explanation

Ancillary structures and outbuildings should be integrated into the total site design to ensure minimal impact on adjoining properties and views to and from a site. The structures should remain discrete rather than be a dominant feature.

Objectives

- Minimise the visibility of ancillary structures and outbuildings from the street, adjoining properties and public spaces;
- Ensure that the appearance of ancillary structures and outbuildings is of a high quality and where appropriate integrates with the streetscape;
- Ensure ancillary structures and outbuildings are compatible in height, bulk and scale with the existing or proposed development on site in the residential locality.

Applicants are advised to refer to the **Exempt and Complying Schedules in Greater Taree Local Environmental Plan 2010** in addition to this section as consent may not be required.

Performance criteria

1. All ancillary structures and outbuildings should be of a quality construction and have minimal visual impact on adjoining properties.
2. Ancillary structures and outbuildings are to be positioned to optimise backyard space and may not be located within the required soft soil landscaping requirement.
3. Ancillary structures and outbuildings are to be single storey.
4. The maximum wall height for ancillary structures and outbuildings is 3m and the roof height is not to exceed 4.8m at any given point.
5. The maximum floor area is 100m².
6. Enclosed ancillary structures and outbuildings with an external wall height greater than 2.7m are to be setback 900mm from any boundary.
7. Open walled ancillary structures and outbuildings may extend to the boundary subject to there being no adverse impact on the amenity of the adjoining properties.
8. Ancillary structures and outbuildings may be used for habitable space, but must not be used as a separate occupancy. Where utilised a habitable space a structure must be no greater than 100m from the principal dwelling.
9. The minimum front street boundary setback is 5m. However, where adjacent residential development is closer to the front boundary, Council may consider a setback equal to that of whichever neighbouring dwelling/building most closely meets the required setback. Where adjacent development is set further back than the minimum requirement, Council may require a greater setback than the minimum permissible.

Ancillary development in R5 Zone

1. The maximum floor area is 200m². Ancillary buildings are required to be single storey.
2. The maximum wall height for ancillary structures and outbuildings is 3.7m and the roof height is not to exceed 5.9m at any given point.
3. Ancillary structures and outbuildings are to be setback 5m from the side boundary.

Part I

Commercial Requirements



Greater Taree
CITY COUNCIL

PART I

COMMERCIAL
REQUIREMENTS

Contents

I1 General controls applying to all business zone areas 3

I2 Landscaping 7

11 General controls applying to all business zone areas

Applies to:

All land within the Greater Taree Local Government Area

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Objectives

- Ensure an appropriate supply, distribution, and mix of retail, commercial and employment floor space across the Local Government Area (LGA);
- Ensure that the retail floor space within the Greater Taree LGA does not undermine the potential of existing and proposed centres within the region;
- Encourage the early investment and delivery of employment generating development and retail uses to serve the population;
- Achieve high quality urban design outcomes which deliver economic, social and environmental benefits to existing and new residents;
- Promote business development which is designed to facilitate an active public domain;
- Ensure business zones in the Greater Taree LGA are supported by adequate and appropriate public infrastructure and amenities.

Performance Criteria

Function and Uses

1. Development within business zones shall incorporate a range of local retail, commercial, entertainment, childcare, residential and community uses to serve the needs of the local community.

Layout/Design

1. The layout and location of business zone uses must consider potential future noise and amenity conflicts for both the subject development and adjoining/nearby development.
2. Where development fronts the street or any other public place (including car parking areas and pedestrian thoroughfares) the development must be designed so that it addresses the street or public place.
3. New development must not detract from significant existing views and vistas.

Built Form and Appearance

1. Buildings should have a similar mass and scale to create a sense of consistency. Within business zones, generally there will be gradation of massing from a dense inner core to a less dense outer edge to provide an appropriate interface with land uses in the adjoining zones and symmetry to the building.
2. Business development must feature high quality architectural design and a built form that promotes a sense of place and contemporary character for all business zones.
3. Development in business zones must be compatible with surrounding business development in terms of appearance, type, bulk and scale, design and character.
4. Building wall planes must contain variations and architectural design features in their front facades in order to provide visual interest.
5. Where multiple tenancies are located within the one building, each tenancy must be defined by appropriate architectural design features (eg. the integration of vertical elements into the façade).
6. Consideration is to be given to the interface where the building and awning abuts an adjoining development to ensure compatibility.
7. Roof forms should be appropriately designed to respond to the built form of other nearby business development. The design of roofs may adopt traditional forms found in the immediate locality, or alternatively they may adopt a more contemporary appearance to juxtaposition to traditional roof forms. However, it must be clearly demonstrated that the proposed roof form relates appropriately to the existing adjoining development.
8. New development must not cause significant overshadowing or overlooking of public places, relative to the patterns of usage of those places.
9. Where a building addresses a corner:
 - the entrance should be on or near the corner;
 - the building should have positive frontage to both streets (i.e. windows and doors that overlook the streets and provide passive surveillance); and
 - the corner should be emphasised through a built form element such as a landmark feature.
10. Buildings on corner lots may have feature elements that exceed the building height limit prescribed in LEP 2010 subject to compliance with Clause 5.6 of the LEP.
11. Where a building addresses a public space, buildings must always address and embellish that public space. Public spaces may include a street, any form of urban open space (e.g. courtyard, plaza, etc), or any form of landscaped open space. This must also help contribute towards placemaking.
12. Service infrastructure such as air conditioning and other plant must be screened from public view and must be incorporated into the design of the building.
13. Site facilities such as loading, waste storage, servicing and other infrastructure shall be designed to minimise the visual impact on the public domain and impacts on neighbours.

14. Security devices shall be integrated with the design of the building and shall enable design features to be interpreted outside centre trading hours.

Pedestrian Amenity

1. Business development must be designed to facilitate high levels of pedestrian amenity and permeability, including access and facilities for cyclists.
2. Development is to incorporate appropriate measures for convenient, weather sheltered access for pedestrians, including access to other land.
3. Buildings should be designed to minimise overshadowing of pedestrian thoroughfares and footpaths wherever possible.

Public Domain

1. Development must include a high quality landscape design including a co-ordinated package of street furniture and lighting that enhances the character of the business zone. The design of landscaping and the public domain must be generally in accordance with Part N of this DCP.
2. The building and landscape design is to be complementary to ensure legible, safe, comfortable and easy access for pedestrians from the street frontages, within the business zone and to adjoining land, where appropriate.
3. Street tree and open space plantings are to provide generous shade for pedestrians.
4. All signage and advertising is to be designed in a coordinated manner.

Parking and Access

1. The visibility of parking areas at street frontages shall be minimised through parking layout and design, building location and design and landscaping treatments. Bitumen and cars are not to be the dominant features of the landscape.
2. Parking areas shall be designed to enable legible, safe, comfortable and easy access for pedestrians from the street frontages, within the centre and to adjoining land, where appropriate
3. Car parking shall be provided in accordance with Part G of this DCP.

I2 Landscaping

Explanation

Landscaping to commercial areas improves the aesthetic appearance and provides shade to vehicles, pedestrians and the public domain areas.

Objectives

- Provide safe environments for users by avoiding or minimising the risks in landscaped areas, and providing landscaping which assists in crime prevention;
- Ensure suitable species are used and landscaping is appropriately located.

Refer to **Part N** of this DCP for further details on landscaping requirements.

Performance criteria

1. Landscape treatment to commercial premises should be in scale with the buildings. The emphasis should be on providing large single areas of planting, rather than smaller, isolated planting beds, which are more prone to vandalism. Species selection should be confined to masses of a few species that are large enough to deter vandalism.
2. Physical barriers such as raised planters may be necessary in places of high pedestrian traffic. Contrasting paving, such as unit paving, should be used to define and direct pedestrian to the major entry points.
3. Where practical, loading docks and service areas should be screened from public view.
4. Security of property and the public by careful placement and selection of plant material should be considered using the criteria of Crime Prevention through Design (CPTD).

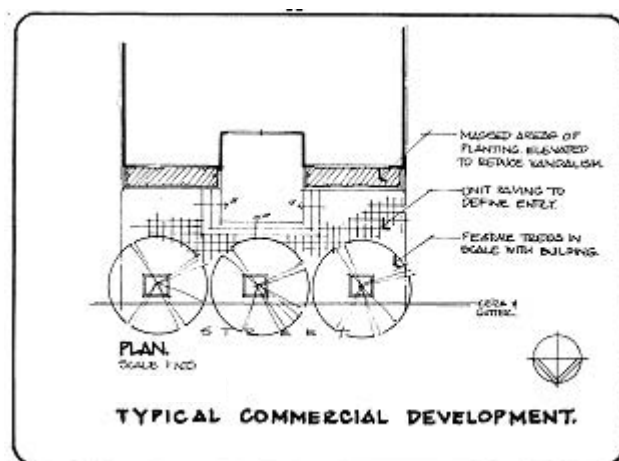


Figure 1 - Typical commercial development landscaping treatment

Part J

Rural & Environmental Zone Requirements



Greater Taree
CITY COUNCIL

PART J RURAL AND ENVIRONMENTAL ZONE REQUIREMENTS

Contents

J1	Development in rural and environmental zones	3
J1.1	General.....	3
J1.2	Building setbacks	5
J1.3	Car parking and access	6
J2	Rural accommodation/tourism	7
J2.1	Rural dwellings	7
J2.2	Rural dual occupancies (detached)	9
J2.3	Rural dual occupancies (attached)	11
J2.4	Rural worker’s dwellings	12
J2.5	Farm stay accommodation	13
J2.6	Eco-tourist development	14
J3	Ancillary development.....	15
J3.1	Ancillary structures and outbuildings	15
J3.2	Rural industry	16

J1 Development in rural and environmental zones

About this part:

This part provides specific guidelines for a range of development within the Rural RU1, RU4 and Environmental E2 and E3 zoned lands of Greater Taree.

Applies to:

All land zoned rural and environmental.

Date adopted by Council:

28 November 2018

Effective Date:

30 January 2019

Related Policy / Technical Manual

GTCC Appendix E

J1.1 General

Explanation

Land zoned for rural and environmental purposes offers a quality and range of opportunities and constraints unique to the urban areas. Generally these lands are identified for their agricultural, soil quality, vegetation types, and threatened species, scenic, topographic or similar values. These values are key considerations in the suitability of development in rural and environmental zones.

Generally development on rural and environmental zoned land should be sited so as not to detract from the amenity and quality of the land and surrounding lands. Development proposed on steep slopes, ridges or hilltops can detract from the scenic and environmental quality of the land, as can unsympathetic road works on a hillside.

Objectives

- Encourage a high standard of development that is sympathetic with the environment;
- Protect identified environmental quality, landscapes, flora and fauna;
- Protect and maintain the viability of agricultural lands;
- Maintain and enhance the rural or environmental scenic amenity.

Performance criteria

1. On land zoned rural the following should be addressed in the use, design and siting of any proposed development:
 - Size and shape of the allotments;
 - Existing vegetation and any endangered ecological communities;
 - Mineral and water resources in the locality;
 - The potential for soils erosion and measures that may be implemented to minimise that occurrence;
 - Any natural hazards, including but not limited to flooding and bushfire risk;
 - Service availability;
 - Adjoining land uses including nearby agricultural operations;
 - Prevailing winds, views and privacy;
 - The scenic quality of the landscape, and any other environmental factors.
2. On land zoned environmental the following should be addressed in the use, design and siting of any proposed development:
 - The likely impacts of the development on the visual and scenic amenity;
 - Any natural hazards;
 - The likely impacts of the development to impact on ground water and surface water, including acidity and water quality;
 - The potential impact of development on the flora and fauna on the land, in particular endangered ecological communities, rare, locally and/or regionally significant vegetation;
 - The habitat values of the land for native and migratory fauna;
 - The effect of any proposed land clearing, draining, levelling or filling on any wetlands;
 - Whether adequate safeguards and rehabilitation measures are proposed to protect the environment;
 - Whether there are any feasible alternatives to the proposed development.
3. Rural development must not reduce the potential of the land for agricultural production.
4. Rural development is not considered appropriate where the slope exceeds 18°.
5. Where an approval is granted for a replacement dwelling, any existing dwelling, with the exception of heritage items, shall be demolished/removed from site prior to occupation of the new dwelling.
6. Development affecting sites of high scenic value and visual prominence:
 - Are to include screening and be constructed of suitable materials to complement the landscape; and
 - may not be constructed of highly reflective materials.

Effluent disposal

1. All development in rural locations will require a suitable system for the treatment and disposal of effluent in accordance with Council's *Onsite Sewage Development Assessment Framework* (DAF 2012) in Appendix E.

J1.2 Building setbacks

Explanation

New dwellings, alterations and additions should be integrated into the existing locality and rural character. This may be achieved through setbacks, which influence the bulk, scale and siting of dwellings. Setbacks are required to ensure an adequate level of separation, public/private threshold, access, privacy, landscaping, fire protection and natural light between dwellings and should reflect the prevailing established subdivision and development pattern.

Objectives

- Integrate new dwellings, alterations and additions with the rural development patterns and character;
- Ensure that dwellings, dwelling alterations, additions and associated larger structures (i.e. garages and sheds) are set back from side and rear boundaries to minimise the bulk, scale and amenity impacts on adjoining properties;
- Optimise solar access and privacy for both the new development and existing surrounding development.

Performance criteria

1. The minimum front street/road setback is 20m.
2. Side and rear setbacks are to be a minimum of 10m.
3. Council may consider reducing the above setback requirements where it can be demonstrated that is necessary because of the topography or other feature including setbacks required for bushfire planning purposes. The reduced setback must not create amenity impacts for adjoining properties.

J1.3 Car parking and access

Explanation

Rural and environmental zones contain a range of residential, agricultural and environmental land uses, which generate vehicular and truck traffic. Development in these areas requires appropriate management of this traffic.

Objectives

- Ensure that parking areas, access ways, driveways and streets allow safe appropriate and efficient vehicle movement and efficient connections to the existing street networks;
- Provide adequate, secure and accessible on-site parking for all uses;
- Minimise the visual and environmental impacts of off-street parking, through considered location of vehicle accesses and parking areas;
- Minimise the visual and acoustic impact of vehicle movements on surrounding development / dwellings;
- Ensure that car parking areas are contained in size and are surfaced appropriately to minimise the adverse effects of additional stormwater point loading.

Performance criteria

1. Where Council considers that the subject land does not have all weather public road access, or that access is physically impractical or does not meet acceptable safety standards, Council will require upgrading of the road to a minimum acceptable standard, together with the lodgement of a bond to cover the costs of roadworks and safety measures including warning signs required for that development. Council may not support a development where the road upgrading is not practical in the circumstances.
2. Garages and driveways do not dominate the character development.
3. Hardstand areas should be minimised and, where soil conditions permit, be substantially constructed using semi-pervious materials to reduce water run-off and increase soil absorption.
4. Design for Vehicle access and parking should in every instance take into account:
 - the uses proposed;
 - the provision of on-site car parking that is easily accessible;
 - the effect of sloping land;
 - the safety of pedestrians and vehicles;
 - efficient use of car spaces and access ways including manoeuvrability for vehicles between the street and the lot.
5. Adequate space shall be provided for the safe manoeuvring and access of cars and heavy vehicles and shall demonstrate that such manoeuvring area is sufficient for the likely traffic requirements.
6. All vehicles are to enter and exit the site in a forward direction.

The **general requirements for car parking and access design** are located in **Part G of this DCP** and should be read in conjunction with this section.

J2 Rural accommodation/tourism

J2.1 Rural dwellings

Explanation

Residential development in rural zones takes many forms, including dwellings which complement the use of the land for primary production purposes, and rural residential living on smaller rural lots. Residential development has the potential to create conflict with other land uses in rural zones if buildings are inappropriately sited and designed.

All development should take into account the inherent rural character of the locality and be responsive to that character and the local landscape qualities

Objectives

Should the subdivision of rural zoned land be likely to impact on existing vegetation, an **approval may be required from the local Catchment Management Authority under the Native Vegetation Act, 2003**

- Ensure that development does not detract from the rural landscape, scenic quality, heritage value, nature conservation significance or agricultural productivity of rural areas;
- Provide separation between residential uses and noise generating sources;
- Provide buffers between residential buildings and land uses to minimise the potential for land use conflict and additional pressure on agriculture or other rural activities;
- Ensure that external finishes used have minimal detrimental impact on the visual amenity of an area;
- Encourage consideration of all the rural components of development such as fencing, outbuildings, driveways and landscaping in the design of the proposed development.

Performance Criteria

1. Buildings in all rural zones shall provide a minimum front setback of 20m.
2. Buildings in all rural zones shall provide a minimum side and rear setback of 10m.
3. Dwellings must be located to minimise the removal of existing vegetation.
4. Buildings should be visually unobtrusive in the overall landscape.
5. Buildings should complement the characteristics of the landform. Cut and fill shall be kept to a minimum.
6. The roofline of buildings should reflect the land profile within the vicinity of the development.
7. All outbuildings must be ancillary to an approved use on the land on which it is situated.
8. External wall cladding to outbuildings shall be of masonry, colorbond sheet metal or other approved material compatible with authorised existing development on the site and the character of the immediate environment.

9. Roof cladding to outbuildings shall be of tiles, colorbond sheet metal or other approved material compatible with authorised existing development on the site and the character of the immediate environment.
10. The colours of roof and wall cladding shall be generally low reflective neutral/earth tones, compatible with authorised existing development on the site and environmentally sensitive, so as to minimise any possible adverse impact on the amenity of the area.
11. All outbuildings shall be provided with appropriate complementary landscaping to minimise the environmental impact on adjoining premises and the area generally.
12. The maximum floor area for rural outbuildings not used for the purposes of agriculture is 500m².
13. On unsewered sites, effluent and household waste water is to be disposed in accordance with Appendix E.

J2.2 Rural dual occupancies (detached)

Objectives

There should be no expectation that the dual occupancy (detached) dwellings can be excised by subdivision other than in accordance with the minimum lot size provisions of Greater Taree LEP 2010.

Additional information relating to assessing land use conflicts can be found in Land Use Conflict Risk Assessment Guide, 2011 (NSW DPI).

- Ensure that development for the purposes of dual occupancy (detached) is of a scale and nature that is compatible with the primary production potential, rural character and environmental capabilities of the land;
- Maintain the rural character and scenic amenity of rural land;
- Reduce rural land use conflicts with adjacent land uses.

Performance Criteria

1. Dual occupancy (detached) in rural areas must be located and retained on the same legal title as the principal dwelling house on the property.
2. Dual occupancy (detached) in rural areas must be located so that it does not create potential for conflict with adjoining land uses and does not reduce the existing or future productivity of the same or neighbouring land. Determination of location and siting of the dwellings will depend on assessment of potential conflicts and buffer requirements.
3. Dual occupancy (detached) in rural areas must use the same vehicular access to a public road to avoid the proliferation of private access points which potentially create traffic conflict.
4. Dual occupancy (detached) dwellings in rural areas must be located within 100 metres of the principal dwelling to reduce pressure for subdivision, increase the potential for shared infrastructure such as power and telephone services, reduce the need for bushfire clearing, and maximise the opportunity for the balance of the subject land to remain productive.
5. Dual occupancy (detached) must be designed and sited in a way that:
 - is compatible with the scale, height and character of the locality and nearby development;
 - minimises native vegetation removal (including for bushfire protection);
 - is responsive to the topography and other land-based constraints;
 - does not create adverse drainage impacts (on-site or to neighbouring properties) or impact on riparian areas; and
 - does not result in visual and privacy impacts.
6. A development application must be accompanied by the following information:
 - property details, area, zoning, and existing use of all parts of the site;
 - a property plan showing existing and proposed infrastructure (including buildings, sheds, services, onsite wastewater disposal, etc) and land use;
 - potential conflicts, including the distance from the proposed dual occupancy (detached) to adjoining land holdings and potentially conflicting land uses (e.g. horticulture, extensive

agriculture, intensive livestock agriculture, rural industry and the like);

- access details, including the proposed internal access arrangements from the public road to the principal dwelling on the site and the proposed dual occupancy (detached); and
- the extent and type of any native vegetation to be removed or impacted (inclusive of clearing for bushfire protection, infrastructure or onsite wastewater disposal) with particular reference to koala habitat.

J2.3 Rural dual occupancies (attached)

Performance Criteria

Reference should be made to the **Greater Taree LEP 2010** which defines **attached dual occupancy** to mean 2 dwellings on one lot of land that are attached to each other, but does not include a secondary dwelling.

1. The development must have the appearance of a single dwelling when viewed from any public place.
2. Dwellings must be constructed so that they are attached under the same roofline and have the general appearance of a dwelling house when viewed from the primary street frontage. Structures such as carports and skillion roofs, pergolas, covered awnings and the like are not acceptable as a mode of attachment.
3. Both dwellings must be constructed of similar materials and colours.

J2.4 Rural worker's dwellings

Performance Criteria

1. Where there is an existing commercial farming activity being carried out on the land and the needs of the activity genuinely require that rural workers reside on the land.
2. The erection of the dwelling will not impair the suitability of the land for commercial farming.
3. Any other dwellings on the land are occupied by persons substantially engaged in agricultural employment on that land
4. The rural worker(s) to occupy the dwelling is to be directly and permanently employed for commercial farming purposes on that land by the owner of the land.
5. Every dwelling within the total area of an existing commercial farming activity is to be situated on the same allotment.
6. The total number of rural workers dwellings erected on the land is not to exceed one (1) for every 40ha of land.
7. Rural workers dwellings are to be constructed to a maximum floor area of 200m².
8. Access to the rural workers dwelling must be from the existing driveway access.

J2.5 Farm stay accommodation

Explanation

The purpose of this section is to facilitate the operation of rural properties as farm stay tourist accommodation, in association with viable farming activities. Such accommodation is to be of a standard that is consistent with the accommodation needs of the touring public without impacting upon the amenity of surrounding areas.

This section also seeks to protect and enhance the rural values of the Greater Taree area, whilst providing for the further promotion and diversification of the local tourism industry.

Objectives

- Maintain the rural values of land on which development for the purposes of farm stay accommodation is carried out;
- Provide for sensitively designed and managed farm stay accommodation that has minimal impact on the rural environment both on and off-site;
- Recognition of the importance of key rural features to the visitor experience.

Performance criteria

1. The farm stay is established in association with the primary use of the site which is a viable and genuine rural activity.
2. Development providing accommodation only is not considered appropriate for rural or environmental locations.
3. Farm stay accommodation is encouraged where this use is secondary to the agricultural or environmental use to assist with the viability of agricultural uses/localities, promotion of agricultural products or environmental values, rural tourism and education.
4. The design of farm stay facilities should be appropriate for the rural/environmental locality, avoid intensive layouts, and provide liberal open space and landscaping in character with the surrounding locality.
5. The farm stay operates from the existing primary dwelling or from an outbuilding associated with the existing primary dwelling.

J2.6 Eco-tourist development

Objectives

- Maintain the environmental and cultural values of land on which development for the purposes of eco-tourist facilities is carried out.
- Provide for sensitively designed and managed eco-tourist facilities that have minimal impact on the environment both on and off-site.
- Recognition of the importance of key natural features to the visitor experience, and where they are off site recognise and address the potential indirect impacts associated with the development.

Performance criteria

1. There is a demonstrated connection between the development and the ecological, environmental and cultural values of the site or area.
2. The development must be located, constructed, managed and maintained so as to minimise any impact on, and to conserve, the natural environment.
3. The development must enhance an appreciation of the environmental and cultural values of the site or area.
4. The development must promote positive environmental outcomes and any impact on watercourses, soil quality, heritage and indigenous flora and fauna will need to be minimised.
5. The site will be maintained (or regenerated where necessary) to ensure the continued protection of natural resources and enhancement of the natural environment.
6. The development must be located to avoid visibility above ridgelines and against escarpments and from watercourses and that any visual intrusion will be minimised through the choice of design, colours materials and landscaping with local indigenous flora.
7. Any power and waste services to the site will be provided, where possible, through the use of passive heating and cooling, renewable energy sources and water efficient design.
8. The development must not adversely affect the agricultural productivity of adjoining land.
9. The development will be designed to utilise materials that blend with the surrounding landscape, promoting the use of recycled materials and materials sourced from the region.
10. The development must demonstrate that it is specifically located and designed for eco-tourist purposes and demonstrates a significant practical reliance on renewable energy and water reuse.

J3 Ancillary development

J3.1 Ancillary structures and outbuildings

Explanation

Ancillary structures and outbuildings should be integrated into the total site design to ensure minimal impact on adjoining properties and views to and from a site. The structures should remain discrete rather than be a dominant feature.

Objectives

- To minimise the visibility of ancillary structures and outbuildings from the street, adjoining properties and public spaces;
- To ensure that the appearance of ancillary structures and outbuildings is of a high quality and where appropriate integrates with the streetscape;
- To ensure ancillary structures and outbuildings are compatible in height, bulk and scale with the existing or proposed development on site in the rural locality.

Performance criteria

1. All ancillary structures and outbuildings should be of a quality construction, have minimal visual impact on adjoining properties, be constructed using materials, colours and finishes that complement the principal dwelling, including low reflective neutral/earth tones and blend with the natural landscape.
2. All ancillary structures and outbuildings are to be located such that they do not impact on the agricultural or environmental land uses/qualities.
3. The maximum wall height for ancillary structures and outbuildings is 4.5m and the roof height is not to exceed 7m at any given point.
4. Enclosed ancillary structures and outbuildings are to be setback 20m from the primary road boundary and 10m to the rear and side boundaries.
5. The maximum floor area of ancillary structures used in conjunction with agriculture is 500m².
6. Ancillary structures and outbuildings may be used for habitable space, but must not be used as a separate occupancy.
7. Farm buildings should feature pitched roofs within the range of 15-25 degrees.

Applicants are advised to refer to the **Exempt and Complying Schedules in Local Environmental Plan 2010** in addition to this section as consent may not be required.

Farm Buildings may be exempt development subject to requirements listed in Subdivision 16 Farm buildings and structures in **State Environmental Planning Policy (Exempt and Complying Development Codes) 2008**.

J3.2 Rural industry

Objectives

- Ensure that rural industries are compatible with the rural environment;
- Minimise any adverse impact of rural industries on surrounding lands.

Performance criteria

1. The minimum lot size required for rural industries is 10ha.
2. Buildings and outside storage areas are to be sited at least 20m from a public street and from any boundary where there is a dwelling on an adjoining property. These setbacks may need to be increased in order to address potential environmental or amenity impacts of the proposed development.
3. Rural industries should maintain the rural streetscape. Designs should complement the surrounding buildings in relation to materials used, colours and building form. Building colours should be low reflective, neutral/earth tones.
4. Outdoor storage yards are to be screened from roadways and neighbouring dwellings.
5. Chained wire fences are to be screened by landscaping.
6. Council may limit the hours of operation of a rural industry where there is a likelihood of adverse impact on the amenity of the surrounding area.
7. No hazardous materials shall be stored below 1% AEP flood level plus 500mm freeboard.
8. Where an industry has the potential to generate offensive odour beyond the boundaries of the site, an odour assessment must be undertaken in accordance with DECCW's *Technical framework: Assessment and Management of Odour from Stationary Sources in NSW* and be submitted with the application.
9. On unsewered sites, effluent and household waste water is to be disposed in accordance with Council's Sewage Management Strategy.

Part K

Industrial Requirements



Greater Taree
CITY COUNCIL

PART K INDUSTRIAL REQUIREMENTS

Contents

K1	Industrial development	3
K2	Key site considerations	4
K3	General industrial controls	5
K4	Building requirements	6
K4.1	Building setbacks	6
K4.2	Building design and materials	7
K4.3	Safety, security and entrances	9
K4.4	Landscaping	10
K5	Ancillary requirements	12
K5.1	Storage	13
K6	Site management requirements	14
K6.1	Car parking and access	14
K6.2	Caretakers residence	16

K1 Industrial development

About this part:

This part provides the detailed guidelines for industrial land and buildings.

Applies to:

All industrial development in the Greater Taree Local Government Area

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Councils' Waste Policy, Council's On-site Detention Policy; Environmental Criteria for Road Traffic Noise (DECCW); Environmental Noise Management Manual (RTA).

Objectives

- Satisfy the needs of industry in Greater Taree.
- Limit the impact of industrial development on the environment.
- Ensure that industrial development is sympathetically related to the streetscape and landscape of the locality.
- Ensure that industrial development is attractive and functional to enhance the appearance and viability of the development.
- Ensure that industrial development retains existing vegetation, wherever possible and practicable, eg within a landscaped buffer.
- Ensure that industrial development is landscaped to soften and enhance the appearance of the development as viewed from the street and surrounding vantage points.
- Ensure that industrial development has adequate onsite parking and manoeuvring areas for the needs of customers, service vehicles and persons associated with the industry; and
- Ensure that industrial development is located so as to be convenient and accessible while not detracting from the appearance or amenity of the surrounding development.
- Facilitate the economic and orderly development of industrial areas for a wide range of uses including industrial, recreational and community uses, and limited business and retail uses that serve the day-to-day needs of those working in the immediate locality.
- Create high-quality industrial areas which embrace innovative and imaginative building design that is both functional and aesthetically pleasing, along with appropriate landscaping and open space areas within each site.
- Minimise the visual and environmental impact of development on the adjoining residential, rural residential and other sensitive land uses.

K2 Key site considerations

Well designed industrial development considers the unique qualities and features of the site, the placement of the proposed development within this site and the potential impacts of that development on the surrounding properties and the streetscape.

Key considerations in site planning include the broad subdivision requirements, contained in Part C of this DCP and a range of site amenity and environmental considerations including:

1. landscaping and existing vegetation;
2. access to water and effluent disposal;
3. stormwater and drainage;
4. access, parking and transport; and
5. soils and erosion.

General design considerations should include the following:

1. The bulk and scale of the building should be minimised and integrate with the surrounding development;
2. The development should clearly identify the nature of the business and the entrance(s) both vehicular and pedestrian;
3. Amalgamation of sites may be required to facilitate appropriate industrial development.

K3 General industrial controls

Retailing

Retailing is not permissible except as outlined below. Showrooms may be permitted where they are ancillary to the principal use of the site, and are used only for the display of goods manufactured, produced or stored on-site.

Neighbourhood Shops

Neighbourhood Shops are permitted in Industrial Zones. Council must be satisfied that the neighbourhood shop will meet the day to day needs of people who live or work in the local area. The maximum gross floor area of a neighbourhood shop is 80m².

Showrooms

In considering applications for ancillary showrooms on industrial premises, Council shall take into account:

- the proportion of the total floor space devoted to the showroom activity
- the nature of the goods to be displayed
- the traffic generating potential of the proposed ancillary showroom and
- the possible need for increased on-site car parking

Note: *Retailing from a showroom that is ancillary to the principal use of premises is not permissible.*

K4 Building requirements

K4.1 Building setbacks

Introduction

The setbacks to industrial development ensure there is sufficient separation between uses, particularly surrounding non-industrial uses. The front setback, in conjunction with landscaping integrates the development into the streetscape.

Objectives

- Ensure that adequate area is available at the front of the buildings to accommodate satisfactory landscaping, access, parking and manoeuvring of vehicles;
- Reduce the visual impact of industrial development on the streetscape.

Performance criteria

1. Setback to the main street frontage is a minimum of 9m.
2. Setback to the frontage on Main Road 112 (Comboyne Road), Wingham Industrial subdivision is 5m.
3. Rear boundary setback is a minimum of 5m.
4. Side boundary setback is 6m to an access side or 3m where no side access.
5. Stairways shall not encroach into the minimum setback.
6. Concession to the following setbacks will only be considered under the following conditions:
 - Awnings over openings or eaves may encroach within the setback.
 - Cantilevered balconies may encroach within the setback to the following extent:
 - Front setback: 1m
 - Side setback: 0.7mProvided that such balconies shall not be enclosed above a height of 1.2m above the deck level at any time.
7. Subject to the requirements of the BCA and satisfactory provision on the site for emergency vehicles access, the side and rear boundary setback, where driveway access is not required, may be reduced to zero if such wall has no openings and is satisfactorily fire rated. Council will not grant this concession if it would result in the removal of significant vegetation or result in other adverse effects on the subject land or adjoining property.
8. Where the site is bounded by more than one street, the building setback may be reduced to 5m for one street frontage only, provided that traffic sightlines are not impaired. With the exception of the setback referred to in number 1 or 2 above this concession shall not apply to a Main Road or Trunk Road frontage.

K4.2 Building design and materials

Introduction

The functional form of industrial development to a large extent influences the appearance of industrial buildings; however, well considered design can greatly improve the appearance of industrial development and its integration into the surrounding urban context. Key considerations include:

1. External building materials, texture and colours.
2. Placement of doors and windows.
3. Relative shapes of various parts of the development.
4. Roof line, guttering, fascia and awning detail.
5. Ventilators, exhaust towers, hoppers, plant equipment, air conditioners etc.

Objectives

- o Encourage industrial development that is functional, well designed and visually compatible and integrated with the local context.

Performance criteria

1. The front facade of the building shall be constructed in brickwork or approved masonry construction to the height of any office section, with returns on side walls to that height, for a distance of 3m.
2. The elevation of a building/s façade facing a public road, reserve, railway or adjoining residential areas are encouraged to be of a high quality design to contribute positively to the built form and landscaped character of the streetscape.
3. Building mass is to be suitably articulated to avoid large and blank expanses of walls.
4. Industrial buildings should be designed so as to create a variety of presentation forms in an industrial area in preference to continuous duplication of styles.
5. Display areas, ancillary offices, staff amenities and other low-scale building elements should be, wherever practicable, located at the front of the premises and integrated into the overall design and street address of the development.
6. Building materials that are highly reflective or less durable should be avoided.
7. Colours and textures of all external finishes are to be compatible with surrounding development.
8. The application of awnings and other articulation to building facades, particularly with appropriate colours, can enhance the overall appearance of a development, especially when shadow effects are combined with landscaping to soften otherwise harsh building materials.

9. All elevations and roof surfaces are to be constructed predominantly in masonry, textured pre-cast concrete panels or colorbond metal cladding. Non-reflective roof surfaces are mandatory. Reflective materials such as mirror glass, colorbond white or off-white metal colours will not be permitted. The reflectivity index for glass used externally in the construction of a building (as a curtain wall or the like) shall not exceed 20%.
10. Development, which is free standing or abutting adjoining buildings, must avoid large, blank wall surfaces when viewed from a public place or a residential area. Substantial elevations must be articulated by either structural variation and/or a blend of external finishes and colours and decorative elements.
11. Colonnades, verandahs and awnings shall be provided along pedestrian areas, particularly for buildings that will experience high volumes of pedestrian movement.
12. While a variety of building designs and materials is encouraged, some continuity of style should be maintained.
13. Proposed buildings on site adjoining land zoned for open space and/or riparian areas shall have regard to the visual and functional opportunities of the location.
14. All roof mounted plant/equipment shall be designed and screened in a manner that complements the parent buildings.

K4.3 Safety, security and entrances

Explanation

Good design incorporates elements that contribute to the actual and perceived safety and security of workers and visitors.

It is good design practice for the front entrance of an industrial development to be prominently sited, with the building frontage facing the street boundary and safe pedestrian access, separated from vehicular and in particular heavy vehicle access.

Objectives

- Ensure a safe physical environment by promoting crime prevention through design;
- Ensure that siting and design of buildings and spaces contributes to the actual and perceived personal and property safety of residents and visitors;
- Ensure that the front entrance of each industrial development is clearly defined and visible to pedestrians and emergency services personnel from the street that it faces.

Performance criteria

1. The site layout should ensure that the front entrance to an industrial development is easily identified by visitors and emergency services through design and conspicuous numbering.
2. Front fences and landscaping elements are to be designed not to obstruct casual surveillance to and from the industrial development.
3. Lighting to the exterior is to be provided to enhance the amenity and security around the building, however, light spill must not adversely impact on adjoining properties.

K4.4 Landscaping

Explanation

Landscaping to industrial development improves the aesthetic appearance and assists to integrate buildings into the streetscape and local character.

Objectives

- Retain existing vegetation where possible;
- Integrate landscaping into the design of industrial development to soften the visual impact of the development;
- Provide safe environments for users by avoiding or minimising the risks in landscaped areas, and providing landscaping which assists in crime prevention.

Performance criteria

1. Landscaping should be aimed at enhancing the visual amenity of the development as viewed from the street and surrounding vantage points.
2. Selection of plant material should consist of low dense planting to 2m in height to screen car parks and storage areas, plus a canopy of trees to provide shade and soften the impact of larger buildings.
3. Plants should be used on site boundaries to control dust.
4. Plantings adjacent to car parking, driveways and vehicle manoeuvring areas should be protected by physical barriers such as kerbs, to prevent vehicular overrun.
5. Council may defer the requirement for completion of landscaping for a period not exceeding twelve (12) months from the notified date of occupation provided prior written notification is given to Council of the intended date of occupation of the premises.

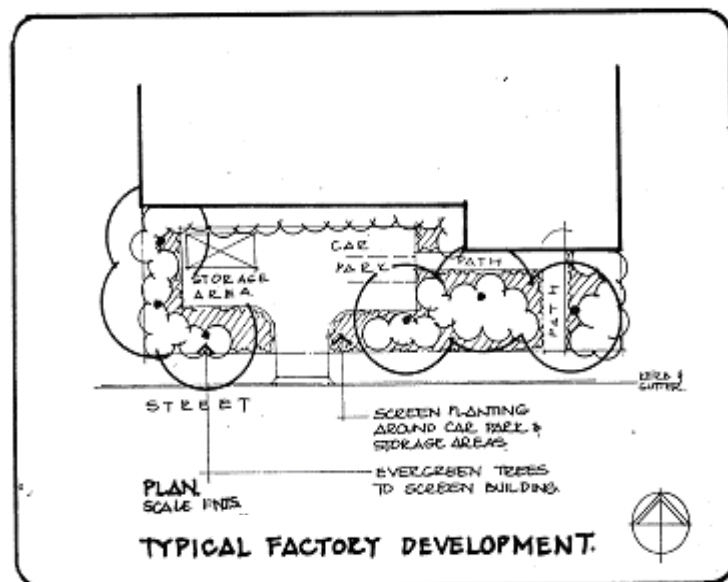


Figure 1 Typical industrial development landscaping treatment

6. Front fencing shall be designed to complement the development and form an important security role taking into account safer by design principles.
7. The maximum height of fencing is 2.1m.
8. The location of the front fencing will be dependent upon the type of fencing.
9. Decorative metal or a combination of decorative metal and masonry fences shall be setback a minimum of 1m from the property boundary.
10. A combination decorative metal and masonry fence with a landscape screening buffer planted in front must comply with the following;
 - a. the ratio of the masonry component to decorative metal component must fall within the range of between 1 part masonry to 6.5 – 7 parts metal panels;
 - b. the metal panels must not exceed 3m in length nor be less than 1.8m in length;
 - c. any masonry plinth established along the bottom of the fence must be not more than 600mm high;
 - d. green or black plastic coated chain wire fencing may be erected behind the designated landscape area;
 - e. galvanised chain wire, untreated metal, colourbond, wooden or barbed wire fencing will not be permitted as fencing in front of the building line or where visible from a public place.

K5 Ancillary requirements

Objectives

The **general provisions for advertising and signage** are provided in **Part O** of this DCP and should be read in conjunction with this section.

- Ensure that industrial estate signage provides clear and business identification and directions;
- Ensure that signage is in keeping with the development in scale, quantity and overall design;
- Ensure that industrial areas are not adversely affected by signage in terms of appearance, size, illumination, overshadowing or visual clutter through a proliferation of signs.

Performance criteria

Some signage is permissible as **exempt or complying development**. Applicants should also refer to **Local Environmental Plan 2010** for the Exempt and Complying requirements.

1. Signage must relate to the uses or activities carried out on the same land on which the advertising sign is to be erected.
2. Signage shall not project over the roadway or footpath.
3. Ensure that signage does not dominate the architecture or cover a large portion of the building.
4. Signage is to be integrated into the design of the building
5. One advertising sign with is a maximum of 5m² may be permitted on the building for each street frontage. This sign may be no higher than the wall on which it is mounted.
6. One logo of a scale appropriate to the building façade may be permitted in addition to (5).
7. One (1) freestanding advertising structure shall be permitted for each street frontage, with a maximum area of 3m².
8. A maximum of two (2) pole or pylon signs per street frontage shall be permitted where:
 - A maximum of 6m² advertising space
 - A maximum overall height of 7m, and
 - The bottom of the pole or pylon is at least 3m above ground level.
9. Multi-unit industrial estates are to provide gateway directional signage for the units, industries and their layout at the entry to the estate. A maximum of one (1) such sign shall be permitted to a maximum of 8m² at the intersection of the entry road and the major through road past the industrial complex. The sign will allow for the general name of the industrial complex, the name of each business, and if appropriate a directional map.

K5.1 Storage

Explanation

Industrial uses generally rely on outdoor storage areas. These areas should be managed to ensure minimal visual and environmental impact.

Objectives

- Minimise the visibility of outdoor storage areas when viewed from a public road, reserve, railway or adjoining residential areas;
- Ensure outdoor storage areas are contained and minimise adverse impact on the environment.

Performance criteria

1. Storage and or work areas are to be located to the rear of the building and screened from view of adjoining streets, public places or residential areas.
2. Chemicals are to be bundled and stored according to the requirements and approval of WorkCover NSW.
3. Designated car parking spaces are not to be used for storage or for industrial garbage receptacles.
4. Pallet storage and the like are to be elevated to prevent the harbourage of vermin.
5. Full details of the storage screening are to be submitted with the development application.
6. Council does not encourage external storage. Where such storage is proposed, Council requires applicants to have regard to the following provisions:
 - a. Where any materials or products are to be stored outside buildings, detail must be provided with the development application.
 - b. External storage areas are to be effectively screened and must not be visible from any public areas.
 - c. In the case of development applications which do not include buildings, screen walls and/ or landscaping or other approved screen devices are to be erected in order to effectively prevent the use of the land being viewed from a public road, nearby public reserve, or dwelling.
 - d. Screening devices are to be designed to harmonise with any existing or proposed landscaping. Landscaping should be used to break up large expanses of screen walls.
 - e. In the case of development applications for the repair and/or wrecking of motor vehicles, the operation of junk yards, or recycling of metal and other waste materials, Council may impose special conditions on outdoor storage. In such cases, early consultation with Council (before the development application is lodged) is advisable.
 - f. Screen walls are to incorporate finishes which match or are compatible with external finishes of the industrial building elsewhere on site.
 - g. Any materials to be stored that can impact water quality must be covered or runoff water must be treated.

K6 Site management requirements

K6.1 Car parking and access

Introduction

Adequate access, manoeuvrability, car parking and loading areas are essentially for the functioning of industrial developments and to minimise any flow on impacts onto the street. Similarly, the space required for these activities needs to be carefully considered and designed to ensure industrial development makes a positive contribution to the streetscape.

Objectives

- To ensure that adequate area is available to accommodate satisfactory landscaping, access, parking and manoeuvring of vehicles;
- To reduce the visual impact of industrial development on the streetscape.

Performance criteria

Note:
General provisions for car parking and access are also contained in **Part G of this DCP** and should be read in conjunction with this section.

1. Space shall be provided for the safe manoeuvring and access of cars and heavy vehicles.
2. The application plan shall demonstrate that such manoeuvring area sufficient for the likely traffic requirements and operation, including the large vehicles.
3. All vehicles are to enter and exit the site in a forward direction.
4. Parking for disabled access is to be provided at the rate of 1 space per 50 car parking spaces.
5. Visitor parking spaces are generally to be provided behind the building line, but may be located between the building line and the street, up to a minimum of 6m from the street property boundary provided that all such parking and access areas in front of the building line are screened from direct view of the street by low earth mounding and or landscaping, which provides visual amenity and meets safety and security requirements.
6. Loading areas are to be sealed and shall be located to the side or rear of the site.
7. Vehicle wash down areas are to be constructed with a waste disposal system to capture water and silt.
8. Development must meet the car parking and access requirements as identified in Part G of the DCP.
9. The car parking requirements are to comply with the controls as set out in Part G of the DCP.
10. All parking shall be provided off-street and shall be appropriately line marked. A sign indicating customer parking shall be displayed at the entrance to the development. The number of parking spaces shall be in accordance with the car parking requirements referred to in Part G of the DCP.

Note: Designated car parking areas are not to be used for storing vehicles under repair, or for any other storage function

11. A maximum of one access driveway is permitted per lot frontage where the frontage is less than 60m.
12. Multiple access driveways servicing a single lot are limited to a maximum of two (2) driveways per lot frontage which must have a minimum separation distance of 30m, measured from the inside edge of each driveway crossover.
13. All loading and unloading shall take place within the loading docks for each building. Where practical, loading facilities or vehicular entries to buildings shall not be provided on any street elevation. Where such facilities can only be provided to street frontages, they shall be screened by suitable landscaping.
14. Car parking on individual sites shall be located to integrate with proposed landscaping.
15. Access driveways shall be constructed as a kerb return not as a splay and shall otherwise be designed generally in accordance with *Australian Standard 2890.2*.
16. Consideration should also be given to providing parking, access and manoeuvring for B-Double size service vehicles. Council encourages provision for these types of service vehicles, particularly on larger development sites.

K6.2 Caretakers residence

Objectives

- Ensure that appropriate accommodation is available for caretakers of industrial developments;
- Ensure the security of industrial premises through on-site surveillance.

Performance criteria

1. Demonstrated need for the full-time surveillance of the industrial use.
2. Adequate car parking provision for the occupants of the dwelling
3. Allocated clothes drying area and private open space allocation for residents of the dwelling.
4. The design of the dwelling must be compatible and consistent with the existing or proposed industrial building.
5. Where necessary the dwelling is to be insulated from any existing or proposed noise generating activities in the vicinity.
6. Any approval is to be conditioned such that the approval for the caretaker's residence lapses when the industrial use is no longer in operation.

Part L

Local Area Plans



Greater Taree
CITY COUNCIL

PART L LOCAL AREA PLANS

Contents

L1	Local area plans	4
L2	Seascape, North Red Head	5
L2.1	Introduction	5
L2.1.1	Boundaries of the site	5
L2.1.2	Relationship to other parts.....	5
L2.1.3	Principle objectives of the site plan	5
L2.1.4	Character statement	5
L2.2	Subdivision requirements.....	7
L2.3	Building and development requirements	9
L3	Bungay Estate	10
L3.1	Introduction	10
L3.1.1	Boundaries of the site	10
L3.1.2	Relationship to other parts.....	10
L3.1.3	Principle objectives of the local area plan.....	10
L3.2	Subdivision requirements.....	11
L3.2.1	Landuse Management	11
L3.2.2	Interpretive signage for historic Bungay Estate ...	11
L4	256 Cedar Party Road	12
L4.1	Introduction	12
L4.1.1	Boundaries of the site	12
L4.1.2	Relationship to other parts.....	12
L4.1.3	Principle objectives of the site plan	12
L4.1.4	Performance criteria.....	14
L5	Precinct 2B	16
L5.1	Introduction	16
L5.1.1	Boundaries of the site	16
L5.1.2	Relationship to other parts.....	16
L5.1.3	Principle objectives of the site plan	16
L5.1.4	Desired future character statement.....	16
L5.2	The precinct plan	18
L5.3	Building setbacks.....	20
L5.4	Street hierarchy	21
L5.5	Street types	23
L5.6	Pedestrian and cycle routes.....	24
L5.7	Parks and open space.....	26
L5.8	Bushfire protection.....	27
L5.9	Acid sulfate soils	29
L5.10	Water management	31
L5.11	Flooding and overland flow	33
L5.12	Safety and security	35
L5.13	The neighbourhood centre	36
L6	Precinct 3, Old Bar	39
L6.1	Introduction	39
L6.1.1	Boundaries of the site	39
L6.1.2	Relationship to other parts.....	39
L6.1.3	Principle objectives of the site plan	39
L6.1.4	Character statement	39
L6.2	Subdivision requirements.....	42
L6.2.1	Road ways	43
L6.2.2	Parks and open space	44
L6.2.3	Environmental.....	45
L6.3	Building and development requirements	47
L7	Manning River Drive Business Park	48

L7.1	Introduction	48
L7.1.1	Boundaries of the site	48
L7.1.2	Relationship to other parts.....	48
L7.1.3	Principle objectives for the site	48
L7.1.4	Desired future character statement.....	49
L7.2	Subdivision, building & streetscape design	50
L7.2.1	Subdivision	50
L7.2.2	Building setbacks.....	51
L7.2.3	Building height.....	51
L7.2.4	Site layout, building design and materials.....	52
L7.2.5	Signage.....	53
L7.2.6	Security, fencing and storage.....	53
L7.2.7	Landscaping.....	54
L7.3	Traffic management	55
L7.4	E2 Environmental conservation zone	56
L7.5	Water management	57
L8	310 – 314 Diamond Beach Road, Diamond Beach	60
L8.1	Introduction	60
L8.2	Boundaries of the site	60
L8.3	Relationship to other parts	61
L8.4	Principle objectives for the site	61
L8.5	Performance criteria.....	62
L9	Figtrees on the Manning.....	65
L9.1	Introduction	65
L9.2	Relationship to other parts	65
L9.3	Boundaries of the site	66
L9.4	Principle objectives for the site	66
L9.5	Performance criteria.....	66
L10	Northern Gateway Transport Hub	67
L10.1	Introduction	67
L10.2	Boundaries of the site	67
L10.3	Relationship to other parts.....	68
L10.4	Principle objectives for the site	68
L10.5	Performance criteria.....	68
L11	Lot 612 Blackhead Rd, Hallidays Point	72
L11.1	Introduction	72
L11.2	Relationship to other parts	72
L11.3	Principle objectives for the site	72
L11.4	Performance criteria	72
L12	Glenthorne Employment Area	75
L12.1	Introduction	75
L12.2	Boundaries of the site	75
L12.3	Relationship to other parts.....	76
L12.4	Principle objectives for the site	76
L12.5	Performance criteria.....	76

L1 Local area plans

Objectives

- Provided additional detailed guidelines to specific local areas;
- Ensure that future development within the specific local area is consistent with the broad site planning principles and any local environmental study findings and recommendations;
- Ensure that the unique features and planning for the site is considered in future development;
- Ensure a balance between reasonable development, standard provisions, protection of amenity of adjoining lands and unique site opportunities.

L2 Seascape, North Red Head

About this part:

This part provides the detailed guidelines for the Seascape, North Red Head precinct.

Applies to:

All land within the site known as Seascape, North Red Head and shown in Figure 1.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Nil

L2.1 Introduction

L2.1.1 Boundaries of the site

All land within the site known as Seascape, North Red Head and shown in Figure 1 following.

L2.1.2 Relationship to other parts

All standard relevant provisions from within this DCP apply where not varied by this part.

L2.1.3 Principle objectives of the site plan

- To ensure the individual development within the site is consistent with the broad site planning;
- To encourage high standards of residential amenity;
- To provide guidelines on how Council will apply the provisions in relation to individual developments and locations within the site.

L2.1.4 Character statement

Seascape on Fig Tree Hill, Red Head is an integrated community in a beachfront setting incorporating natural elements such as drainage, open space, fauna and flora corridors, view corridors and pedestrian and cycleway connections to the public and surrounding residential areas.

The design of the homes will reflect the particular coastal character in terms of architecture, landscaping, colours and materials. The location will incorporate community identity with a strong sense of openness and individuality.

L2.2 Subdivision requirements

Explanation

Subdivision is a key feature of the site planning for the seascape development.

Objectives

- Ensure the development within the site is consistent with the broad site planning principles;
- Ensure protection of fauna and flora and the natural environment;
- Encourage pedestrian and cycleway connections to the public spaces and adjoining residential areas;
- Protect life and property from bushfire;
- Encourage high standards of residential amenity, view sharing, sunlight access and privacy;
- Ensure amenity of the public spaces and reserves.

Performance criteria

1. The location and design of the lots shall generally be in accordance with those shown in Figure 1.
2. The road network shall generally be in accordance with that shown in Figure 1.
3. Prior to any development consent being issued for subdivision of land, Council require an urban stormwater drainage strategy, which aims to minimise urban stormwater discharge from the developed site and to maintain a maximum urban water quality.
4. The development shall provide construction of the inter-village pedestrian cycleway included in Council's draft open space and Recreation Facilities Plan.
5. Subdivision will require the land shown on the map as 'koala habitat corridor' to be dedicated to Council at no cost at an appropriate stage of the subdivision.
6. A Koala Plan of Management shall be prepared for the site, which will involve:
 - a. Habitat protection requirements,
 - b. Habitat restoration requirements,
 - c. Traffic management requirements,
 - d. Dog management requirements,
 - e. Feral animal management requirements,
 - f. Bush fire management,
 - g. Koala welfare public education, and
 - h. Monitoring requirements.
7. Habitat shall be restored within these corridors, using endemic koala food tree species.
8. In association with subdivision approval, Council will require suitable treatment of the intersection of the koala habitat corridor with access roads to the subdivision. Consideration will be given to koala specific underpasses, at grade intersection treatment, or canopy based over passes.

9. Koala / fauna exclusion fencing shall be utilised along the edges of the koala habitat corridor.
10. Prior to the approval of any subdivision application, Council will require a Bushfire Protection Assessment Report and the findings of such assessment will be either included in the design of the subdivision layout, included as condition of consent granted, or included as 88(B) of the Conveyancing Act, 1919, Instrument Requirements on Allotments to be created.
11. Council will encourage residential mixed use in the area identified in Figure 1.

L2.3 Building and development requirements

Objectives

- Ensure the development within the site is consistent with the broad site planning principles;
- Ensure compatibility with the scale, built form and intensity of use with surrounding development;
- Achieve a balance between reasonable development of the site, privacy, view sharing and sunlight access.

Performance criteria

1. Single dwellings only will be allowed on lots less than 750m².
2. Dual occupancy development will only be permitted on lots greater than 750m².
3. Medium density development will only be permitted on the sites identified in Figure 1.
4. Residential mixed-use development is encouraged on the areas identified in Figure 1.
5. Residential mixed-use development will incorporate an area, which is fully self-contained and has a separate external entrance.

L3 Bungay Estate

About this part:

This part provides the detailed guidelines for the Bungay Estate, Wingham.

Applies to:

All land within the site known as the Bungay Estate, Wingham.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Nil

L3.1 Introduction

L3.1.1 Boundaries of the site

The following specific development provisions apply to land zoned R5 on Part Lot 1 DP754454, Lots 11, 12, 81 and 82 DP754454, Lot 72 DP801074 and Lot 1 DP 716936.

L3.1.2 Relationship to other parts

All standard relevant provisions from within this DCP apply where not varied by this part.

L3.1.3 Principle objectives of the local area plan

- Minimise potential conflict between R5 zoned land and surrounding agricultural land uses;
- Acknowledge the importance of facilitating continued environmentally appropriate agricultural land uses;
- Ensure that the use of large lot residential properties is compatible with surrounding agricultural land uses;
- Ensure that dwelling houses are appropriately sited to achieve minimal scenic and environmental impact;
- Ensure any activity has minimal impact on the Manning River foreshore.

L3.2 Subdivision requirements

L3.2.1 Landuse Management

Performance criteria

1. A Landuse Management Plan must be prepared for the site that includes objectives and measures to reduce the potential landuse conflict between the R5 zoned land and surrounding agricultural land uses. Such measures must include, but not be limited to:
 - a. The containment of companion animals (cats & dogs) at all times in the R5 land because they are incompatible with the establishment and continuation of surrounding agricultural land uses;
 - b. Identification of the buffers necessary to reduce the potential landuse conflict between the R5 land and surrounding agricultural land uses and the associated right to farm.
2. A Foreshore Plan of Management must be prepared for the proposed foreshore reserve in the south east of the site, zoned E2 that includes objectives and measures to reduce the impacts of the development on the Manning River foreshore.
3. The road layout must provide public vehicular access to future staged development to each Lot referred to in L3.1.1.

L3.2.2 Interpretive signage for historic Bungay Estate

Performance criteria

1. Provision for interpretive signage within a vehicle lay-by at the entrance of the subdivision must be incorporated into the subdivision design. Advice shall be sought from Council's Strategic Heritage Advisory Committee on the wording of the interpretive signage prior to lodgement of the development application for subdivision.

L4 256 Cedar Party Road

About this part:

This part provides the detailed guidelines for 256 Cedar Party Road, Taree.

Applies to:

All land within the site known as 256 Cedar Party Road, Taree and shown in Figure 2.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Rezoning application and proposed subdivision Lot 15 DP 777261 Cedar Party Road Taree Local Environment Study (with Addendum and Amendments) 22 February 2006.

L4.1 Introduction

L4.1.1 Boundaries of the site

The following specific development provisions apply to the site known as 256 Cedar Party Road, Taree and shown in Figure 2.

L4.1.2 Relationship to other parts

All standard relevant provisions within this DCP apply where not varied by this part.

L4.1.3 Principle objectives of the site plan

- Minimise potential conflict between proposed development and surrounding land uses;
- Ensure that dwelling houses are appropriately sited to achieve minimal environmental impact;
- Ensure development has minimal impact on water quality and ecological integrity.



L4.1.4 Performance criteria

A development principles plan for the proposed subdivision is shown in Map 1. Any subdivision should be in accordance with Figure 2 and the following management recommendations.

Koala Habitat

1. The following remnant tree species, as identified by survey on the constraints plan (in the Local Environmental Study), are to be protected by a 'Restriction As To User' Instrument prohibiting their removal:
 - a. Tallowwood *Eucalyptus microcorys*,
 - b. Forest Red Gum *Eucalyptus tereticornis*,
 - c. Small-fruited Grey Gum *Eucalyptus propinqua* and
 - d. Grey Ironbark *Eucalyptus placita*.
2. The areas of identified koala habitat on the site to be protected by a 'Restriction As To User' prohibiting clearing within the nominated areas.
3. Replanting with koala feed trees is to occur within the areas identified on the development principles plan. Approximately five (5) trees per lot are to be planted, being any combination of the species nominated on the plan. Trees are to be planted so that when mature canopies will not be connected to minimise bushfire hazard.
4. The removal of any of these trees (over 150mm DBH) should be compensated by planting on a 10:1 basis within the proposed lots.
5. Stands of Koala Food trees are to be planted along the eastern boundary to connect through to the Creek line remnant, to allow fauna movement.
6. A Vegetation Management and Landscape Plan detailing the above measures is to be prepared prior to any clearing works and consideration given to avoiding any conflict with Bushfire Asset Protection Zones and requirements on Lot owners (e.g. plantings could be in stands of 5-10 trees separated by open grass areas with no projected canopy within 5m of a house or valuable asset). Plantings should be protected by a 'Restriction As To User' Instrument to ensure their long-term retention.
7. That a restriction be placed on the subdivision which states that:
 - a. all cats and dogs be prohibited or securely enclosed and prevented from roaming freely, especially between the hours of 6 pm and 6 am.
 - b. all fences be erected in such a manner as to not restrict the natural movement of native fauna, especially the Koala. Where a fence is solid (e.g. Colourbond) over a reasonable distance (approximately 30m), a wooden climbing post (or alike) should be provided to allow Koalas and other arboreal species to climb over (both sides) of the fence. Alternatively do not construct such fences for distances greater than 30m.
 - c. Swimming pools or large fishponds should have thick climbing ropes, available to any fauna, which may fall into the water to provide a means of escape.
8. Koala warning signs should be erected on Cedar Party Road and internal roads to alert drivers of local Koala activity.

The Drainage Line

1. The Creekline should be preserved and vegetation habitat enhanced. A 20m wide reservation on either side of the creekline is proposed. This area should be included within a minimum number of lots and lot boundaries should not be located along the creekline. The area should not be severed by additional road construction.
2. A 'Restriction As To User' should be placed over this buffer to prevent future removal of vegetation.
3. A Vegetation Management and Landscape Plan should be prepared for this buffer. This should include details of enhancement plantings targeting the local Koala Food Tree species (Tallowwood, Forest Red Gum, Grey Ironbark and Grey Gum) and a 2 year maintenance period addressing weeds and necessary watering of plantings when required.
4. Livestock should be excluded from the buffer.

Clearing of Vegetation

1. Prior to any clearing or construction works all trees/vegetation within 100m should be checked for the presence of significant fauna. If Koala or other threatened species are found, activity is to be ceased until the animal has moved on by its own accord.
2. All living identified stags (habitat trees providing hollows) are to remain. The two dead stags are able to be removed, as fauna survey results determined no significance in their retention.
3. All clearing of living or dead trees is to be in accordance with the recommendations of the Environmental report prepared by ID Landscapes (accompanying the Local Environmental Study).

Building Location

1. A 'Restriction As To User' is to be imposed requiring all buildings to be located outside the asset protection zones identified on site.

L5 Precinct 2B

About this part:

This part provides the detailed guidelines for Precinct 2B, Old Bar.

Applies to:

All land within the site known as Precinct 2B, Old Bar and shown in Figure 3.

Date adopted by Council:

16 July 2008

Effective date:

17 September 2010 (gazettal of Amendment No 2 to LEP 2010)

Related Policy / Technical Manual:

Nil

L5.1 Introduction

Due to the precinct plan being initially prepared without consideration of existing allotment boundaries, the situation may arise whereby some future roads and lot boundaries may not quite accord with the existing lot boundaries. In these cases, these discrepancies should be ignored in the assessment of any development application in order to achieve a best fit for the future subdivision within the existing lot layout framework.

L5.1.1 Boundaries of the site

All land within the site known as Precinct 2B, Old Bar and shown on in Figure 3.

L5.1.2 Relationship to other parts

All standard relevant provisions from Parts A – I apply where not varied by this part.

L5.1.3 Principle objectives of the site plan

Objectives

- To achieve high quality urban design outcomes

L5.1.4 Desired future character statement

The Precinct comprises residential areas, passive and active open space, a riparian corridor and district centre. The Precinct is essentially focused on providing for well-designed one and two storey homes; as well as parks and streets that provide pedestrian and recreational opportunities. The Precinct also builds on the opportunities presented by the central riparian corridor, and the treed areas adjoining the west of the site. The Precinct provides for a new district centre to serve Old Bar and nearby areas.

The residential areas are divided into smaller neighbourhoods most notably by the Oyster Creek corridor, and Old Bar Road, but also by collector and boulevard streets with their distinct planted median strips. Local parks provide focal points and a sense of place to different neighbourhoods. Aboriginal archaeology in the Precinct will benefit from the location of a park at the Precinct's northern end. Most specimens of Sydney Peppermint in the Precinct fall within a park located in the south-eastern end of the Precinct. The riparian corridor is to be embellished and maintained to sustain and improve potential wildlife movement opportunities within the corridor. The riparian corridor is edged by streets, in order to provide passive surveillance, good public access and for ease of maintenance.

Within each neighbourhood, streets are designed for safety, connectivity and to provide opportunities for establishing trees. The orientation of streets is largely made to achieve lots that will provide for homes to easily achieve effective solar access. Each neighbourhood will be typically characterised by detached style housing to a maximum of two storeys. The Precinct will also provide a range of opportunities for small-lot housing and medium density housing, particularly in areas of higher amenity adjacent the district centre.

A new district centre is located to provide for the requirements of wider Old Bar. This centre is to function as the primary commercial and civic centre for Old Bar. There is to be a balance between retail practicalities and the opportunities to create a vibrant main street and civic park. A variety of community facilities are to be housed in this new district centre. All buildings along Old Bar Road within the district centre are to front and activate the street.

Environmentally sensitive stormwater management systems feature throughout the Precinct in order to improve the quality, and to manage the quantity, of stormwater runoff. Stormwater management systems are to be used as a feature for the Precinct.

L5.2 The precinct plan

Explanation

The Precinct Plan provides an indicative layout for development of Precinct 2B. The desired future character statement above gives more detail on the features considered important to the future character of the release. The district centre area can be seen in more detail in Part L5.13.

At the time of rezoning Precinct 2B comprised nearly 50 separate lots, with almost as many owners. The precinct plan provides a means by which the subdivision and development on these original allotments can be tied together to achieve an overall form that functions well as a whole. This means the achievement of a functional road hierarchy, a seamless riparian corridor, definitive cycle and pedestrian routes, key visual linkages with focal points, and a consistent built-form address particularly to higher order streets and open space.

On the north side of Old Bar Road, narrow lots are shown indicatively to demonstrate a requirement for attached housing capable of complementing the more urbanised nature of Old Bar Road as it passes through the district centre, and to better reinforce and activate this part of the main street. Medium density development is otherwise recommended in higher amenity locations such as opposite public open space. This improves the amenity of smaller lots which comparatively have less private open space, and improves the number of households in the release with quality outlooks.

The precinct plan is drawn with individual lots shown. This is considered indicative to demonstrate the kind of character anticipated. It is not intended that these indicative inter-allotment boundaries necessarily be followed literally.

Where a subdivision is designed with a layout for minor streets that departs from the layout of the minor streets in the precinct plan, then such an alternate design will need to demonstrate attention to core constraints such as the bushfire setbacks, traffic management, optimal orientation for solar access, provision for pedestrian and cycle routes, as well as the provision of adequate open space and water management features.

Objectives

- Holistically plan for the future development of the precinct area;
- Plan for the creation of a future Old Bar neighbourhood centre;
- Ensure the integration of stormwater and flooding management, environmental management, bushfire management, roadway design and pedestrian and cycleways within future development of the precinct area.

Performance criteria

1. The Precinct Plan will prevail over other diagrams contained within this Development Control Plan where an inconsistency is apparent.

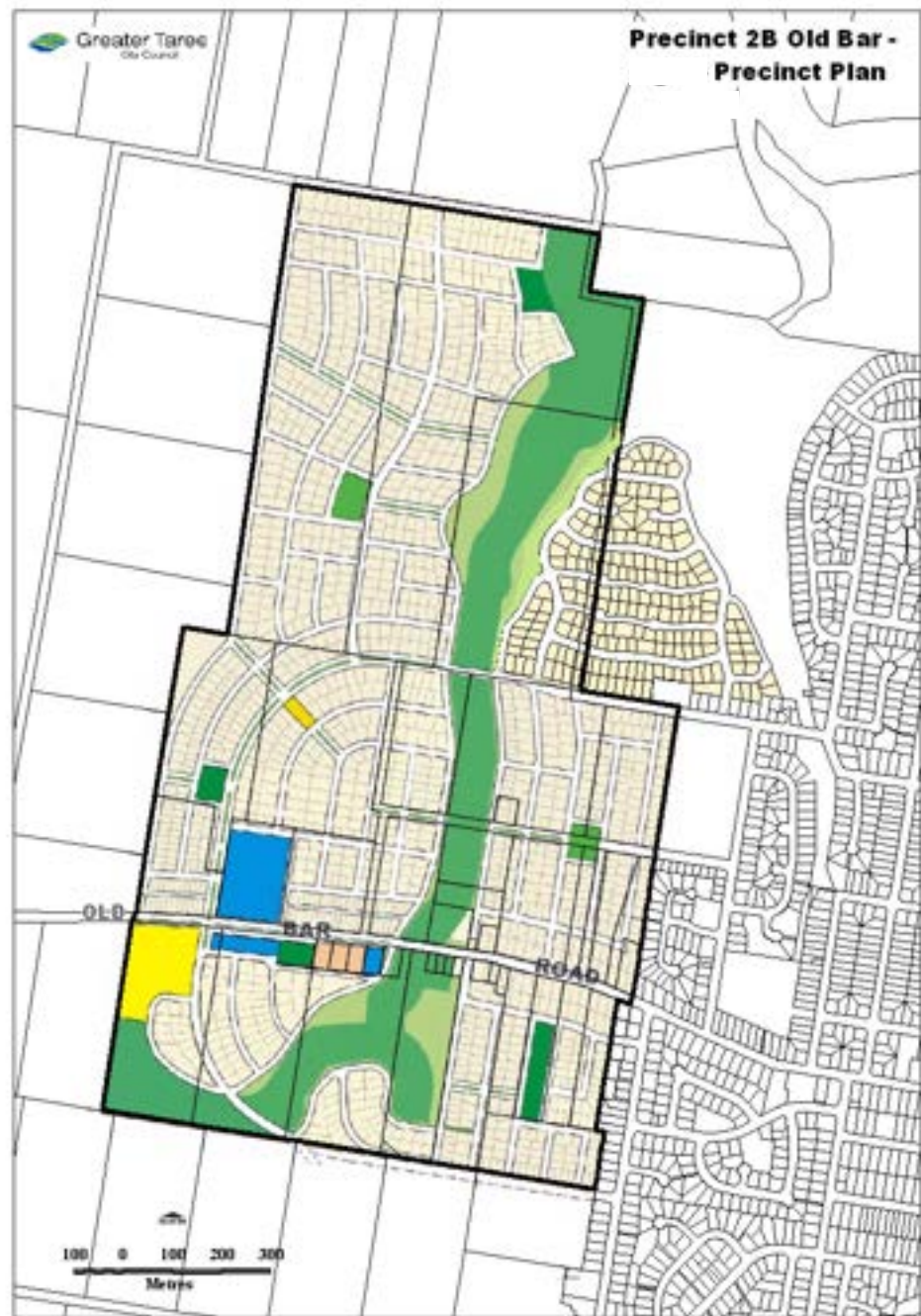


Figure 3 – Precinct Plan

L5.3 Building setbacks

Explanation

Street setbacks are a means of protecting neighbour amenity. They also affect the character of a streetscape.

Objectives

- Provide for a landscaped setting for residential buildings;
- Recognise the more dominant nature in a streetscape of second storey dwellings;
- Reduce garage domination in the streetscape;
- Create an urbanised and activated frontage to Old Bar Road within the district centre.

Performance criteria

1. The minimum frontage setback is 5.5m to the second storey and to garage doors.
2. The minimum front setback is 4.5m to the ground floor.
3. The minimum front setback for multi-dwelling houses is 4.5m to the ground floor, second storey and the garage.
4. The minimum front setback to non residential land uses on sites adjoining Old Bar Road is 0m.

L5.4 Street hierarchy

Explanation

The street hierarchy plan provides a guide to where different street types are required. The application of the different street types has been designed in a manner that provides enough ease of carriage to suit the nature of the traffic, without providing excessive opportunities for higher traffic speeds.

Objectives

- Maximise accessibility;
- Celebrate key routes and vistas;
- Open up public access to natural assets;
- Add variety and interest;
- Achieve the creation of practical shaped street blocks.

Performance criteria

1. Street layout and hierarchy within the precinct will be consistent with the map in Figure 4.

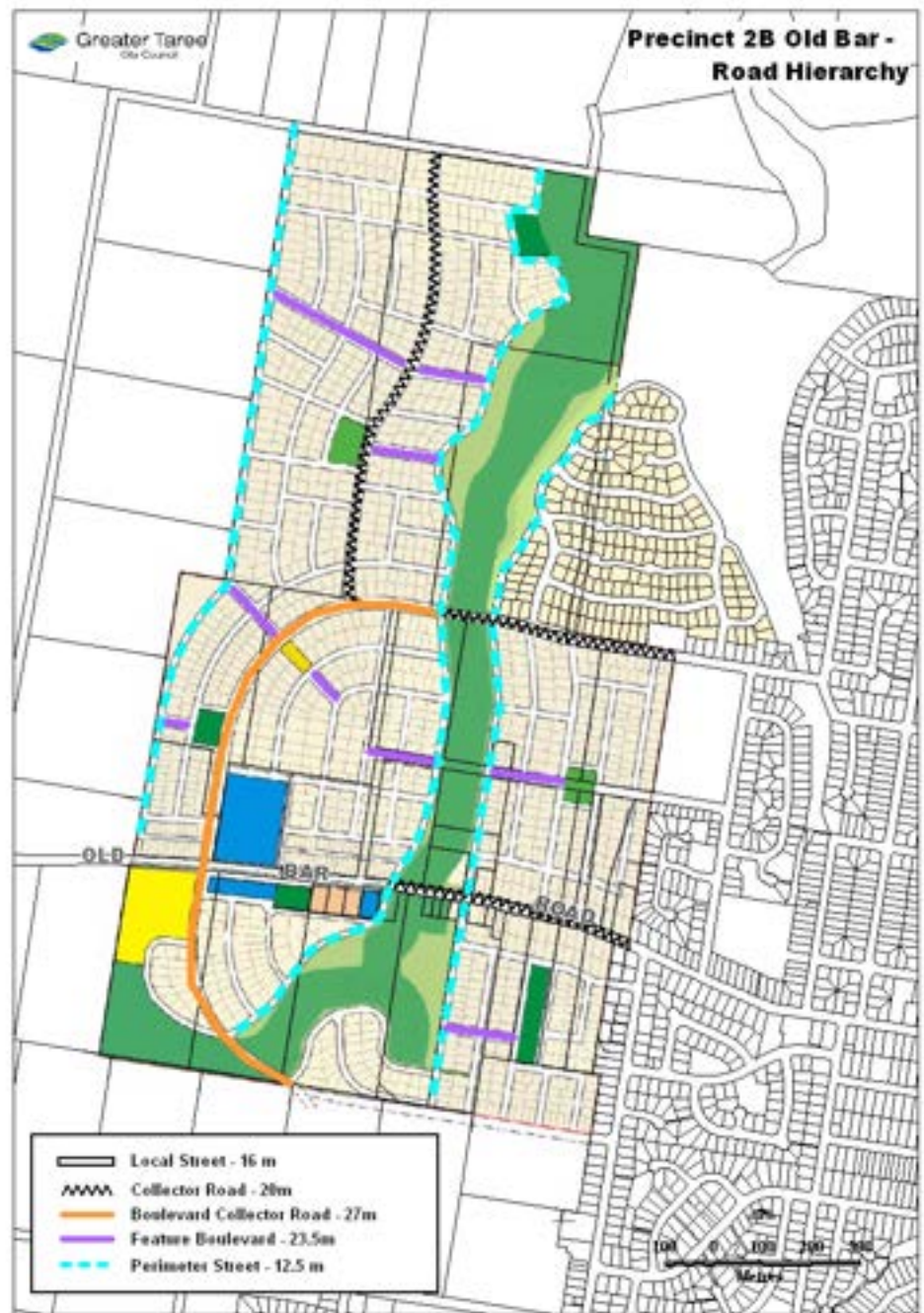


Figure 4 – Road Hierarchy

L5.5 Street types

Explanation

The street sections below provide graphical explanation and detail to complement the street hierarchy plan. These are the street types to be used in the Precinct. Street sections for Old Bar Road are included with the district centre controls (Part L5.13).

Objectives

- Use land efficiently;
- Provide landscape opportunities;
- Create public environments that balance vehicular travel demands with residential amenity and the safety of pedestrians and cyclists.

Performance criteria

The specifications for street hierarchy shall be in accordance with *Auspec Guidelines Table D1.5*, as follows:

Boulevard Collector Roads will be 27m wide incorporating:

- 4m verges each side of the road with 1.2m footpaths
- Parking lanes each side of the road 2.25m wide.
- Bike paths each side of the road 1.5m wide.
- Divided carriageway with 3m lanes and a planted median 5.5m wide.

Feature Boulevard Roads will be 23.5m wide incorporating:

- 4m verges each side of the road with 1.2m footpaths.
- Parking lanes each side of the road 2.25m wide.
- Divided carriageway with 3m lanes and a planted median 4.5m wide.

Collector Roads will be 20m wide incorporating:

- 4.5m verges on each side of the road with 1.2m footpaths.
- 11m undivided carriageway.

Local Streets will be 16m wide incorporating:

- 4m verges on each side of the street.
- 8m carriageway.

Perimeter Streets will be 12.5m wide incorporating:

- A 3.5m verge on one side of the street, and a 1m verge on the other side of the street.
- 10m carriageway.
- A 2.5m off-road path.

Local Streets and Perimeter Streets require the use of shared trenching for services.

Pavements for Boulevard Collector and Feature Boulevard Roads are as for Collector Roads.

L5.6 Pedestrian and cycle routes

Explanation

Dedicated pedestrian and cycleways enable linkages between key locations, recreational opportunities and safe movement of pedestrians and cyclist throughout the community.

Under NSW law cyclists under 12 years of age are allowed to use the footpath either unaccompanied or accompanied. On residential streets, cyclists have the option of sharing the street with motorists in order to enjoy comfortable turning radii, more route flexibility and to have the same priority as motorists at intersections.

Objectives

- Provide safe recreational walking and cycling opportunities throughout the precinct and linking to wider pedestrian and bicycle ways and key locations;
- Provide key linkages across the site;
- Improve cyclist safety in moving traffic.

Performance criteria

1. Pedestrian and cycleway locations are to be provided as shown in Figures 4 and 5.
2. The boulevard collector shall include a 1.5m on-road bicycle lane in each direction.
3. Strong north-south connections are to be provided through shared off-road cycle and pedestrian paths of 2.5m to either side of the riparian corridor and on the western edge of the precinct.
4. East-west connections are to be provided through 2.5m pathways within designated verges.
5. Standard 1.2m wide footpaths are to be provided to at least one side of the higher order residential streets as shown in Figure 5.

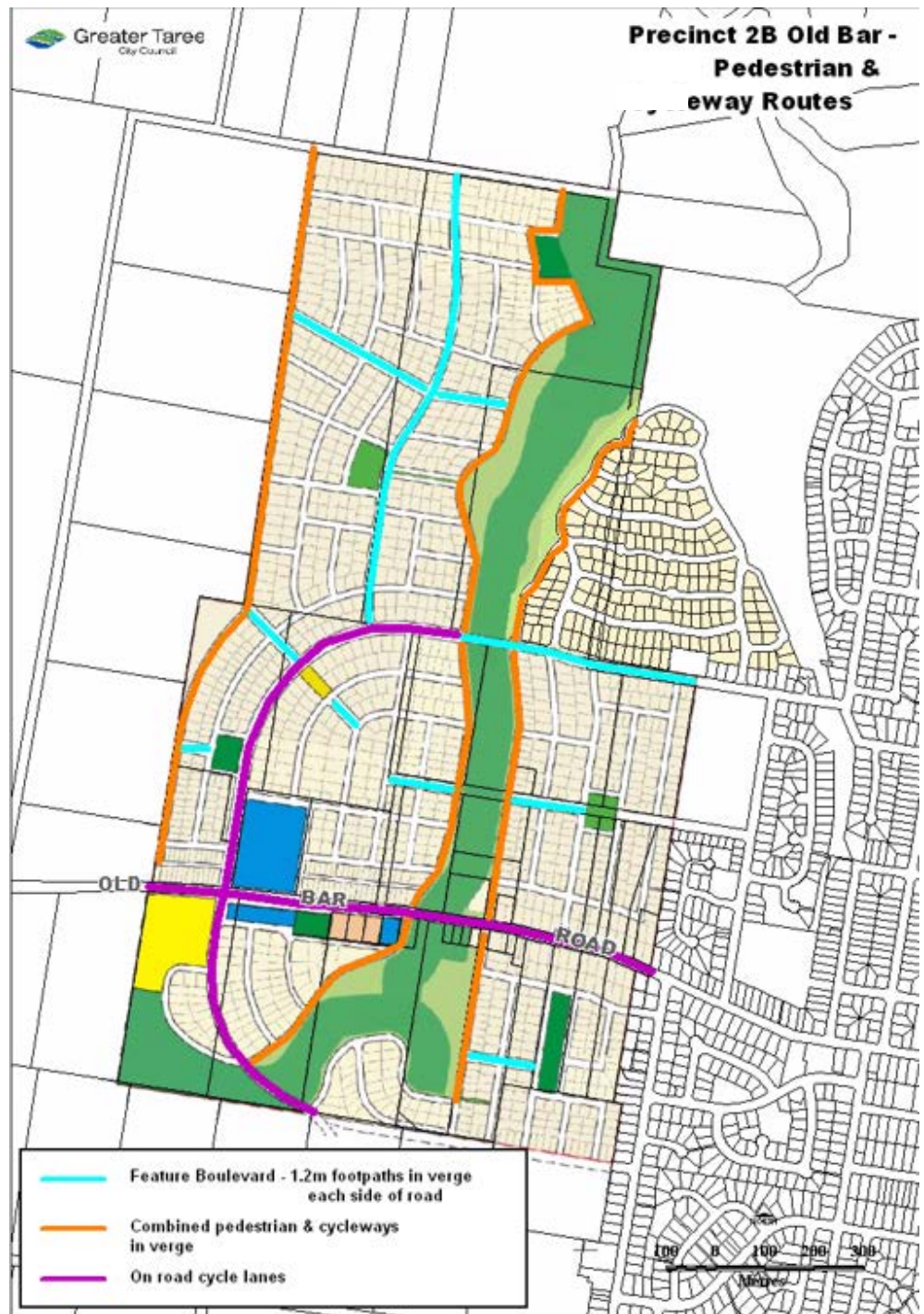


Figure 5 – Pedestrian and Cycleway Routes

L5.7 Parks and open space

Explanation

The precinct plan includes a variety of open space, and a significant riparian corridor. These local parks are to be a focal point and create a sense of place for local neighbourhoods. Certain parks have other important values in addition such as containing locally significant vegetation or having Aboriginal archaeological value.

Objectives

- Retain areas of important values, including Aboriginal archaeological value, and of locally significant vegetation;
- Achieve environmental protection;
- Provide and enhance public access;
- Create a sense of place for the local neighbourhood.

Performance criteria

In any **preparation of a Plan of Management** to accompany a DA, consultation should be undertaken with Council's Strategic Planning Department.

1. Applicants intending to pass control of environmental protection land to Council are required to prepare a Plan of Management, for such areas and submit this with the relevant subdivision development application.
2. A concept plan (EDAW, 2006) demonstrates how the landscaping and rehabilitation might be carried out. The Plan of Management for and design of the northernmost park in the precinct will require liaison with the Purfleet-Taree Local Aboriginal Land Council with respect to the significance of this site. The park in the south-eastern corner of the Precinct is to retain existing vegetation (which includes the locally significant species *Eucalyptus piperita*) in a managed state that will not pose a bushfire risk to adjoining homes.

L5.8 Bushfire protection

Explanation

The plan following shows the bushfire setbacks (dark line) applicable to dwelling houses in the Precinct. The setbacks vary from 20m, 30m and 40m. The required setbacks, for example, for non-residential classes of buildings may vary from these. Such variations between building classes reflect differences in construction and differences in how buildings are occupied.

Objectives

- Ensure appropriate siting of new development where this adjoins bushland areas;
- Ensure the protection of buildings and occupants from potential bushfire risk.

Performance criteria

1. Any application to erect a building on land affected by the bushfire setbacks, as shown in Figure 6, will need to demonstrate appropriate building setbacks, appropriate construction methods (including AS3959-2009), and, where required by the NSW Rural Fire Service, provision for fire fighting services such as hydrants.
2. Consideration must be given to whether a development proposal near a bushfire source poses excessive challenges in terms of evacuation and fire fighting.

Further information and reference may be found in **Bushfire Protection Assessment (BES, April 2005)** and **Planning for Bushfire Protection (NSW Rural Fire Service, 2006)**. Consideration should also be given to **Section 79BA of the Environmental Planning and Assessment Act 1979**.

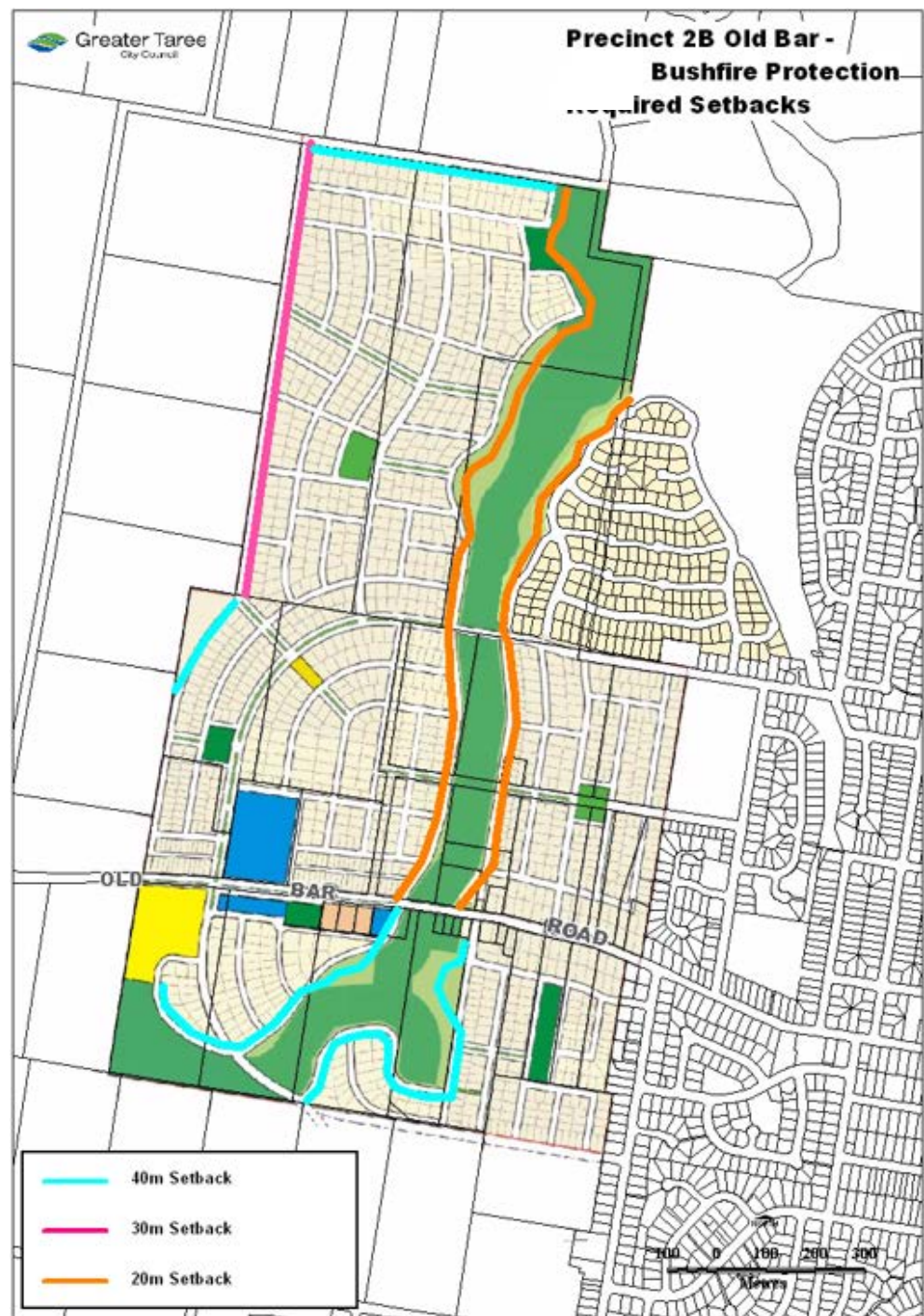


Figure 6 – Bushfire Protection – Required Setbacks

L5.9 Acid sulfate soils

Explanation

The following plan highlights the location of actual acid sulfate soils in the Precinct as identified in the Acid Sulfate Soil Assessment for the Precinct (RCA Australia, 2005).

Objectives

- Ensure consideration of the impact of future development on actual acid sulfate soils and remediation of areas disturbed by development.

Performance criteria

1. Any application involving disturbance of Acid Sulfate Soils will require submission of an Acid Sulfate Soil Management Plan prepared in accordance with the requirements of the current Local Environmental Plan.

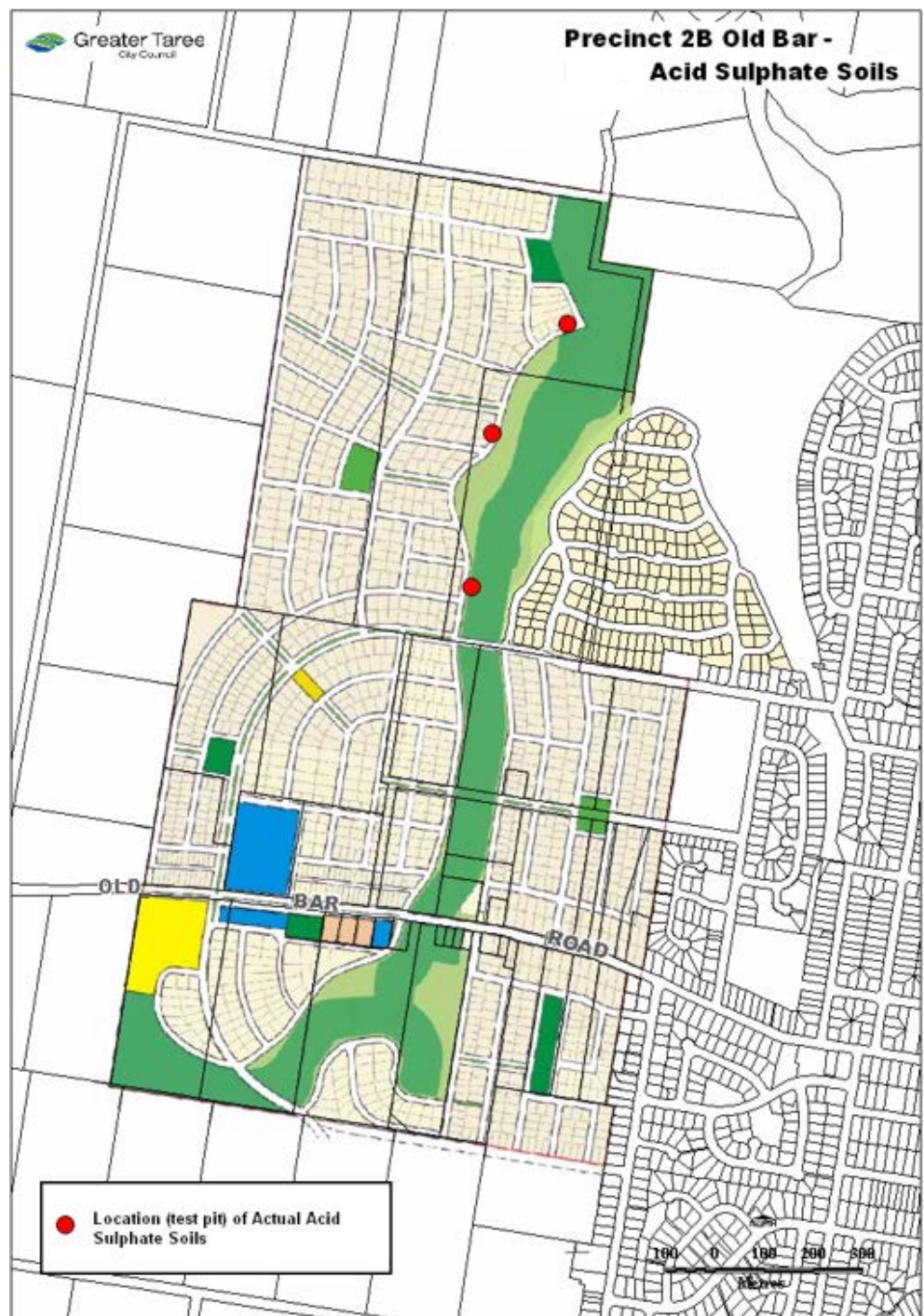


Figure 7 – Acid Sulfate Soils

L5.10 Water management

Explanation

The following plan highlights the required water management works in the Precinct. It is important that stormwater runoff from Precinct 2B does not adversely affect Oyster Creek or the SEPP 14 wetland in the northern part of the site.

Applicants should consult with MidCoast Water in regard to the requirements of the **Integrated Water Cycle Management Plan**.

Objectives

- Ensure that stormwater runoff from the site is of an acceptable quality and quantity;
- Ensure stormwater runoff does not adversely affect Oyster Creek or the SEPP 14 wetland in the northern part of the site.

Performance criteria

1. Development within the precinct will be consistent with the Residential Stormwater Management Plan as shown in Figure 8.
2. Water monitoring of Oyster Creek is required prior to the lodgement of any Development Application for subdivision in order to obtain a baseline for future monitoring. Aspects that are required include timing, distribution, velocity, quantity and quality.
3. A saltmarsh has been found within the SEPP 14 Coastal Wetland at the northern end of Oyster Creek within the precinct, which is considered rare, is an endangered ecological community and is inadequately reserved. In light of this, a consent condition will be imposed for any subdivision deemed by Council to possibly have an impact upon the saltmarsh to the effect that the proponent must undertake water monitoring in relation to water balance (timing, distribution, velocity, quantity and quality) during and after the construction phase of development within the subdivision.
4. An integrated Water Cycle Management Plan is required to be undertaken prior to the lodgement of any Development Application for subdivision and must be in accordance with the Brief for this study adopted by Council at its Planning Committee Meeting on 13 September 2006.

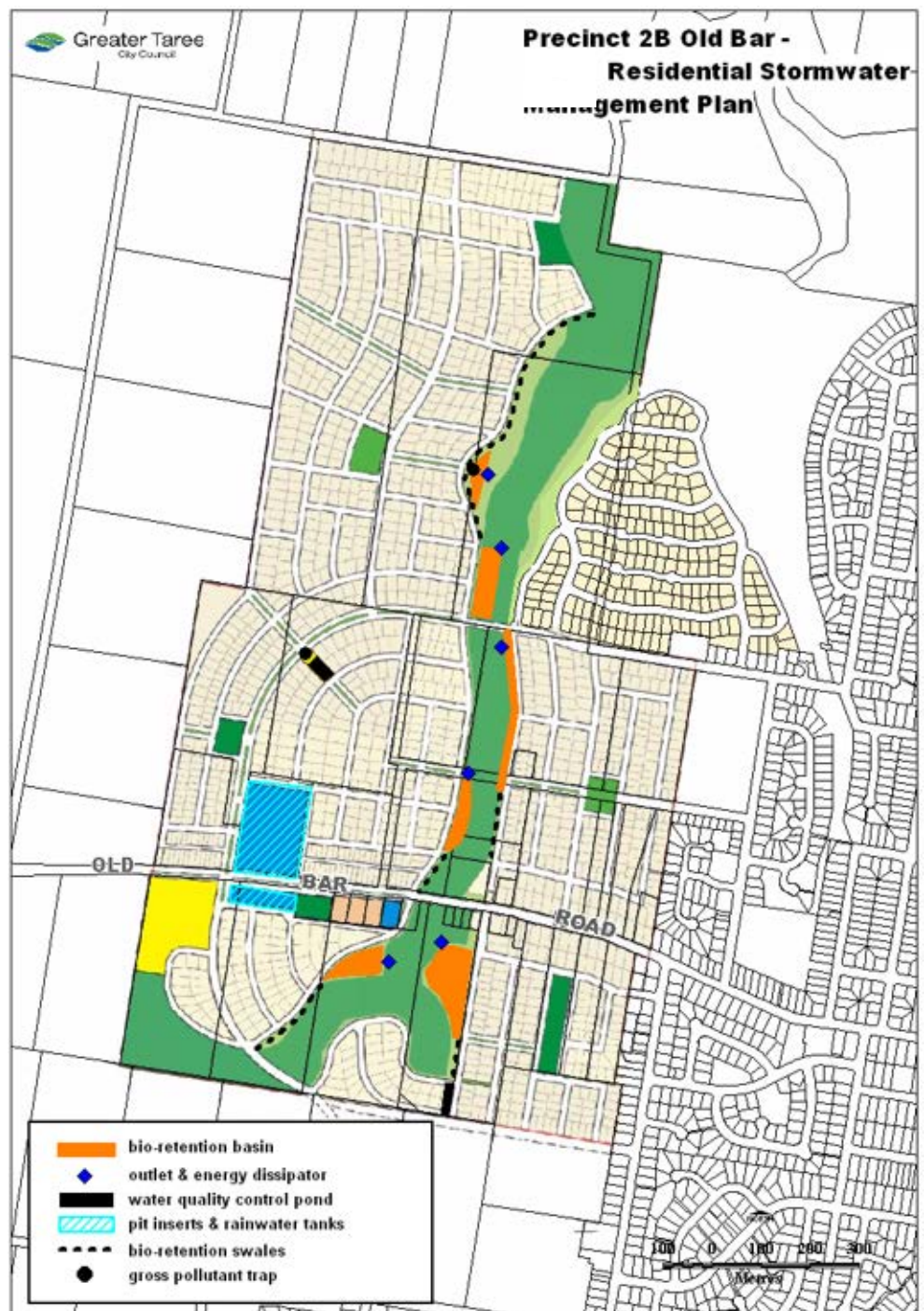


Figure 8 – Residential Stormwater Management Plan

L5.11 Flooding and overland flow

Explanation

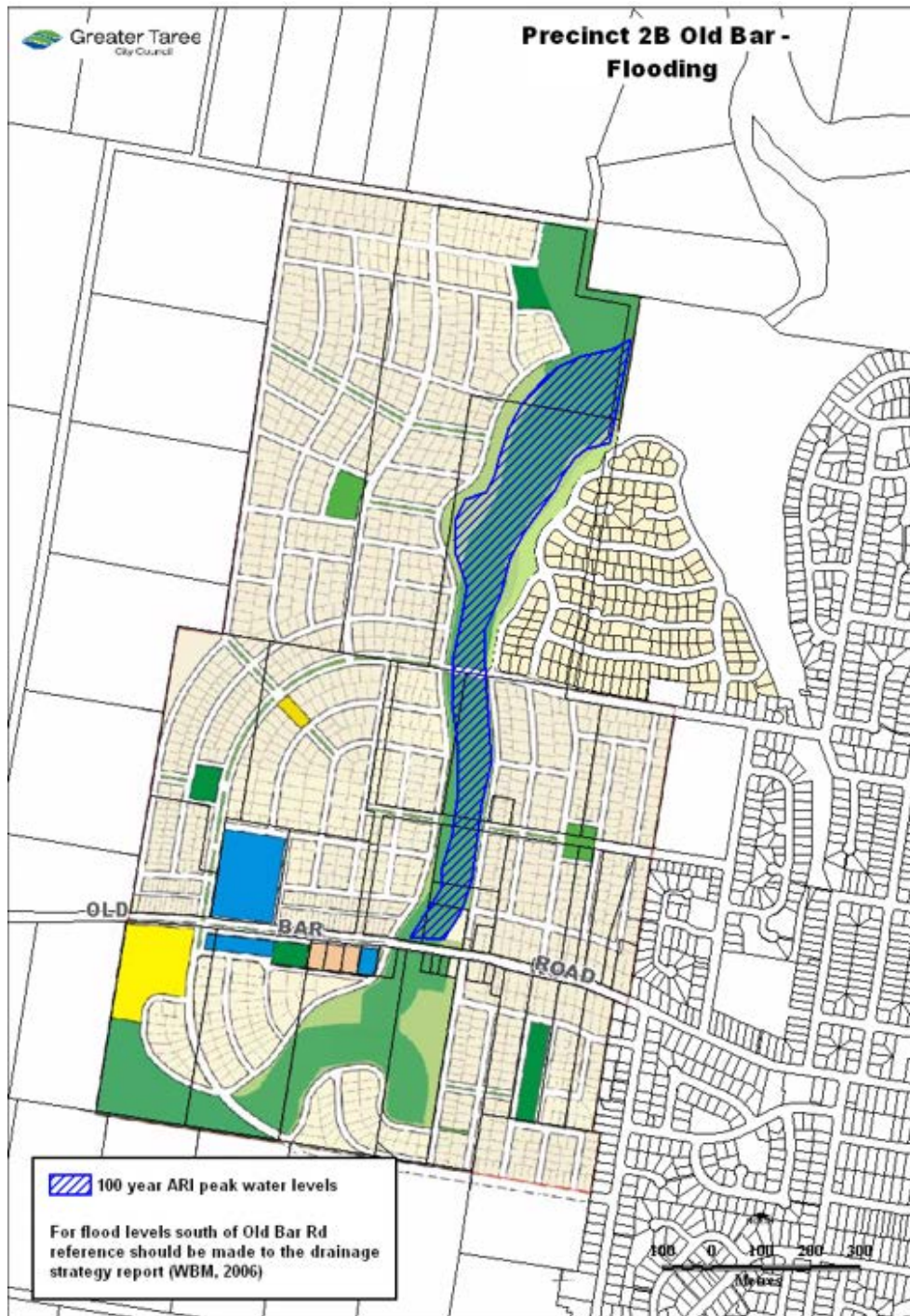
The diagram following shows the estimated 1% Average Recurrence Interval (ARI) peak water level for the land north of Old Bar Road, as adapted from the *Trunk Drainage and WSUD Strategy for Precinct 2B, Old Bar* (WBM Oceanics Australia, 2006).

Objectives

- Manage flooding and overland flows within the precinct;
- Prevent significant risk to life and property.

Performance criteria

1. Each subdivision within the precinct adjacent Oyster Creek will need to consider and address the 1% Average Recurrence Interval (ARI) peak water level as shown in Figure 9.
2. Considering the relatively direct flow path from the Precinct to the ocean, any development will ensure that filling works will not create considerable downstream flooding impacts.
3. Carriageway Surfaces of the Main Collector Road must have a surface level in accordance with *AUSPEC Design Guidelines D5.12*.
4. The finished floor level of dwellings shall be no less than 500mm above any 1% ARI level.



L5.12 Safety and security

Explanation

Good design incorporates elements that contribute to the actual and perceived safety and security of residents and visitors.

Objectives

- Create an environment that makes residents feel comfortable and reduces risk of criminal activity;
- Create public spaces and streetscapes as environments that attract people;
- Clearly delineate public from private space in order to distinguish legitimate public thoroughfares and to engender pride of ownership;
- To encourage casual surveillance and maintain adequate sightlines;
- Minimise opportunities for concealment and entrapment.

Performance criteria

1. Applications may be referred for consideration by the NSW Police. Applications that are referred will incur an additional fee.
2. Entrances to buildings are to front the street.
3. Front boundaries should be clearly delineated using landscaping or fencing.
4. Numbering and signage should be clear.
5. Bushy landscaping in the stratum of 1m to 2m above the ground should not directly adjoin footpaths, unless barrier fences shield the landscaping.
6. Bushy landscaping in the stratum of 1m to 2m above the ground should not be located where it will screen entrances, pathways and front windows from being viewed from the street.
7. Blank facades and fences that make good canvases for graffiti shall be minimised. Where a blank wall is justified it needs to use materials or thorough landscaping to be softened and to reduce opportunities for graffiti.
8. Facilities like bus stops, ATM's, public toilets, and telephone booths should be located in higher traffic locations where they enjoy good surveillance.

L5.13 The neighbourhood centre

Explanation

A new district centre is located to provide for the requirements of wider Old Bar. This centre should function as the primary commercial and civic centre for Old Bar, with a balance between retail practicalities and the opportunities to create a vibrant main street and civic park.

Objectives

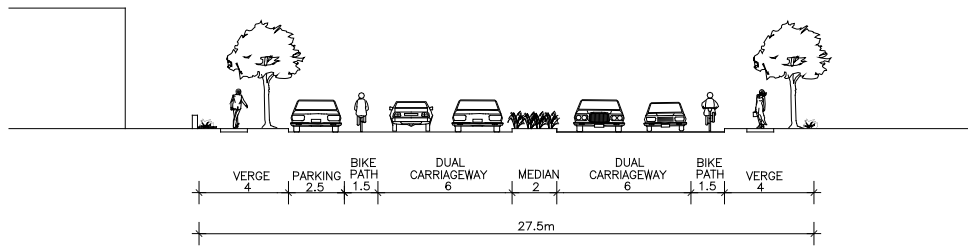
- To provide a new district centre for Old Bar with both retail and community land uses;
- To approach Old Bar Road as an opportunity to create an attractive public space within the District Centre;
- Provide a strong edge to the street in order to reinforce and activate this section of Old Bar Road;
- To provide a civic park to further add amenity to the District Centre;
- Buildings surrounding the civic park create a strong edge that activates the park;
- To ensure that parking and loading areas do not detract from the amenity of the District Centre.

Performance criteria

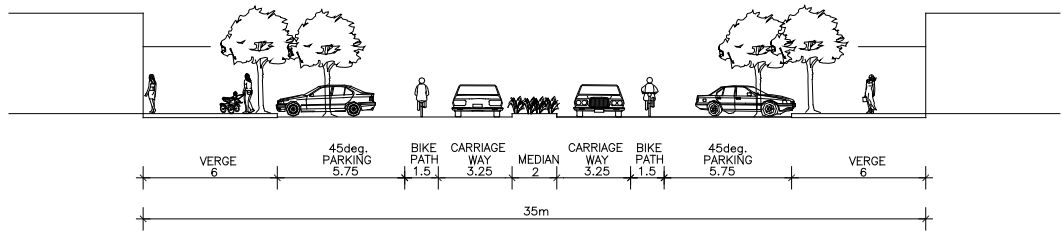
1. A neighbourhood centre is to be located adjoining Old Bar Road, west of the Oyster Creek riparian corridor.
2. The centre is to allocate a number of land uses in accordance with the Precinct Plan (see detailed District Centre Plans in Figures 10 and 11).
3. Retail and community use buildings on Old Bar Road within the District Centre shall front and address the street and provide an awning over the footpath (See indicative building outlines in dark blue, Figure 10).
4. The design of Old Bar Road in the centre needs to respect that this is intended as an environment that is safe for pedestrians.
5. All buildings adjoining the civic park should address this park.
6. Any residential development on Old Bar Road, west of the Oyster Creek corridor needs to be predominantly two stories in height, and predominantly attached housing. Spacing of at least 2m width should be provided between groups of attached homes after at least every eighth attached dwelling.
7. All commercial loading areas need to be adequately screened from view from public streets.
8. All on-grade car parks shall be landscaped to provide shade and soften the appearance from the street.



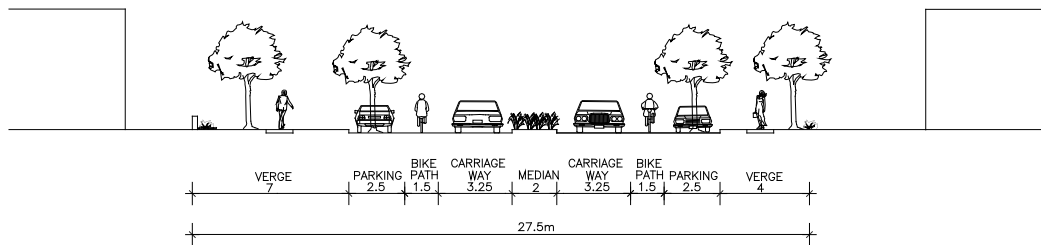
Figure 10 – Old Bar neighbourhood centre plan



SECTION AA



SECTION BB



SECTION CC

L6 Precinct 3, Old Bar

About this part:

This part provides the detailed guidelines for Precinct 3 at Old Bar.

Applies to:

All land within the site known as Precinct 3, Old Bar bounded in red within Figure 12.

Date adopted by Council:

17 November 2010

Effective Date:

17 June 2011

Related Policy / Technical Manual:

- Precinct Planning Report, (GHD, March 2010) and accompanying studies; and
 - Precinct 3 Aboriginal Cultural Heritage Assessment (Ainsworth Heritage, March 2010)
-

L6.1 Introduction

L6.1.1 Boundaries of the site

All land within the site known as Precinct 3 Old Bar and shown in Figure 12.

L6.1.2 Relationship to other parts

All standard relevant provisions from within this DCP apply where not varied by this part.

L6.1.3 Principle objectives of the site plan

The principal objectives of this part are to:

- protect and enhance the environment of Precinct 3;
- ensure that development is carried out to a consistent standard throughout Precinct 3; and
- protect the amenity of existing development by ensuring a high standard of design and construction in new subdivisions.

L6.1.4 Character statement

The Precinct comprises residential areas, passive and active open space and a golf course. The Precinct is essentially focused on providing for well-designed one and two storey homes; as well as parks and streets that provide pedestrian and recreational opportunities. The Precinct also builds on the opportunities presented by the central Racecourse Creek floodplain, and the treed areas adjoining the southern and western boundaries of the Precinct.

A proposed golf course and new sporting fields will be located within the central and southern parts of the Precinct to provide a community focal point for competitions and tournaments.

Environmentally sensitive stormwater management systems will feature throughout the Precinct in order to improve the quality, and to manage the quantity, of stormwater runoff. Stormwater management systems are to be used as a feature for the Precinct.

The residential areas are divided into smaller neighbourhoods by the Racecourse Creek floodplain and proposed golf course, Forest Lane, and the proposed Collector Roads and Boulevards with their distinct planted median strips. Local parks will provide focal points and a sense of place to different neighbourhoods. Aboriginal archaeology in the Precinct will benefit from conservation zoning within the north-western corner of the Precinct. The reserve in the southern portion of the Precinct is to be embellished and maintained to sustain and improve potential wildlife movement opportunities within the corridor.

Within each neighbourhood, streets will be designed for safety, connectivity and to provide opportunities for establishing trees. The orientation of streets will facilitate lots that will provide for homes able to achieve effective solar access.

The precinct neighbourhood character includes:

Forest Glen

Housing would be predominantly detached dwellings with generous landscaping. Tree lined streets would present an attractive streetscape without closed fencing to allow passive surveillance of the street.

Golf Course Mews

Integrated Housing or Multiple Dwellings will have a lesser front setback to the first and second stories, and to the garage reinforcing the more urban character. Each neighbourhood will be typically characterised by a range of housing styles.

The Precinct will also provide a range of opportunities for Multi-unit housing, particularly in areas adjacent to the beach and golf course.

Large Lot Residential

Large Lot Residential development in the north-western corner of the Precinct will compliment the rural character of the surrounding area.

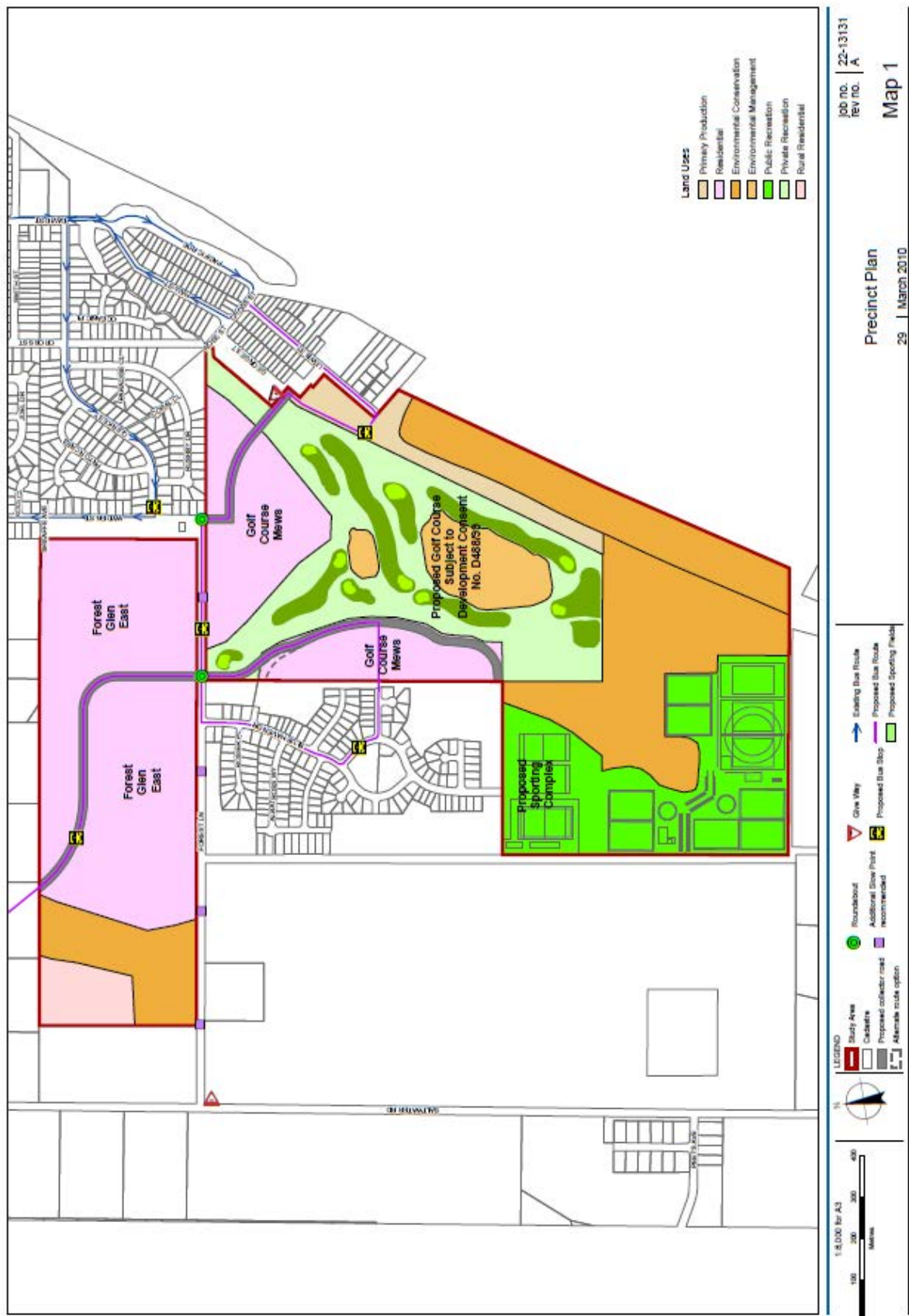


Figure 12- Precinct Plan

L6.2 Subdivision requirements

Explanation

Subdivision is a key feature of the site planning for the Precinct 3 development. This part is to be read in conjunction with Part C of this DCP and if any inconsistency occurs, this part will prevail.

Objectives

- Facilitate greater diversity in housing choice;
- Strike a balance between cost effectiveness and recurrent costs to Council and the community;
- Provide an appropriate level of amenity for new and existing residential areas;
- Ensure appropriate levels of service are achieved for utilities and the road network;
- Optimise use of existing infrastructure;
- Ensure environmental constraints and impacts, such as flooding, drainage, vegetation, erosion etc are adequately considered;
- Encourage innovative design; and
- Encourage energy efficiency.

L6.2.1 Road ways

Objectives

- The Collector/ Boulevard Roads identified in the Precinct Plan Map provide a network for maximising accessibility, identifying key routes and vistas, opening public access to natural assets, adding variety and interest; whilst achieving alternate objectives like the creation of practical shaped street blocks.
- Streets use land efficiently, whilst providing landscaping opportunities, and creating public environments that balance motor travel demands against residential amenity, and the safety of pedestrians and cyclists.

Performance criteria

The specifications for street hierarchy shall be in accordance with *Auspec Guidelines Table D1.5*, as follows:

Boulevard Collector Roads will be 27m wide incorporating:

- 4m verges each side of the road with 1.2m footpaths
- Parking lanes each side of the road 2.25m wide.
- Bike paths each side of the road 1.5m wide.
- Divided carriageway with 3m lanes and a planted median 5.5m wide.

Feature Boulevard Roads will be 23.5m wide incorporating:

- 4m verges each side of the road with 1.2m footpaths.
- Parking lanes each side of the road 2.25m wide.
- Divided carriageway with 3m lanes and a planted median 4.5m wide.

Collector Roads will be 20m wide incorporating:

- 4.5m verges on each side of the road with 1.2m footpaths.
- 11m undivided carriageway.

Local Streets will be 16m wide incorporating:

- 4m verges on each side of the street.
- 8m carriageway.

Perimeter Streets will be 12.5m wide incorporating:

- A 3.5m verge on one side of the street, and a 1m verge on the other side of the street.
- 10m carriageway.
- A 2.5m off-road path.

Local Streets and Perimeter Streets require the use of shared trenching for services.

Pavements for Boulevard Collector and Feature Boulevard Roads are as for Collector Roads.

L6.2.2 Parks and open space

Objectives

- Local parks are to be a focal point and create a sense of place for the precinct neighbourhoods;
- Certain parks also meet important environmental values including protections of locally significant vegetation or Aboriginal archaeological value.

Performance criteria

1. Local parks shall be located within 400m of future residential development.
2. Parks shall be a minimum size of 1 to 2 hectares and where possible be linked to open space/ bushland/ reserves.
3. Parks within the precinct shall provide facilities including: kick about, shelter; seating; picnic area and high quality pedestrian paths.
4. Local parks should be of a practical shape and size for recreational use.
5. The proposed sports fields in the south-western corner of the Precinct are to retain existing vegetation (which includes the locally significant species *Eucalyptus seeana*) in a managed state that will not pose a bushfire risk to adjoining homes.
6. Any parks dedicated to Council are required to have a Plan of Management.

L6.2.3 Environmental

Objectives

To ensure:

- the protection of Aboriginal Cultural Heritage;
- appropriate consideration of flooding hazards within the precinct;
- consideration of safety and security requirements within the precinct design;
- sustainability principles are considered within the precinct design.

Performance criteria

Archaeology

1. Applications for subdivision or other development must be accompanied by an archaeological report prepared by an appropriately qualified person.
2. All earthworks must comply with the Aboriginal Cultural Heritage Report recommendations and the appropriate approvals sought as required under the National Parks and Wildlife Act, 1974.

Vegetation

1. All vegetation within Environmental Protection zones are to be retained and protected.

Floodplain Management

1. All residential lots shall be contained on land above the 1% flood level, as determined by Council.
2. Where proposed development is to be located below the 1% flood level, it must comply with the following provisions and be consistent with any Floodplain Management Plan adopted by Council for the Precinct:
3. A flooding analysis is to be submitted with the development application and approved by Council's Engineers prior to issue of consent.
4. Minor filling may be permitted within the 1% flood extent subject to an engineers report certifying the development will not result in any increased flood affectation elsewhere and results in a better planning solution.
5. No adverse change to the flood behaviour will be permitted, either on properties adjoining the site or elsewhere upstream and downstream of the site. This includes consideration of level and velocity for the full range of flood events.
6. Carriageway surfaces of the Boulevard Collector Road and Feature Boulevard must have a surface level in accordance with *AUSPEC Design Guidelines D5.12*.
7. Road layout and subdivision design must ensure safe flood evacuation for pedestrians and vehicles in accordance with the flood evacuation plan for the site.
8. Roads across waterways are to be constructed to required Council standards.

9. The finished floor level of dwellings shall be no less than 500mm above any 1% ARI level.

Safety and Security

1. Applications may be referred for consideration by the NSW Police. Applications which are referred will incur an additional fee.

Energy Efficient Design

1. Lots are to be orientated to facilitate the siting of dwellings that will have adequate solar access. A minimum of 75% of single dwelling allotments shall be orientated so that the long axis of the lot is within 20 – 30 degrees of N and NE.

Stormwater Management

1. Development is to incorporate Water Sensitive Urban Design in accordance with any Council/ Mid Coast Water IWCMP Policy in operation at the time and/or current best practice.

L6.3 Building and development requirements

Objectives

- Ensure the development within the site is consistent with the broad site planning principles;
- Ensure compatibility with the scale, built form and character of use with surrounding development;
- Achieve a balance between reasonable development of the site, privacy, view sharing and sunlight access.

Performance criteria

General performance criteria for dwellings are outlined in Part H of this DCP.

Density is not to exceed the floor space ratio as stipulated in the LEP for the R1 General Residential zone.

L7 Manning River Drive Business Park

About this part:

This part provides detailed guidelines for the area of Manning River Business Park. This Part applies in addition to the requirements of Part C – Subdivision Requirements & Part K – Industrial Requirements.

Applies to:

All land within the site shown in Figure 13 and includes land zoned B5, E2 and IN1.

Date adopted by Council:

14 December 2011

Effective date:

23 December 2011

Related Policy / Technical Manual:

Nil

L7.1 Introduction

Manning River Business Park located on the southern entrance of Taree is being planned to accommodate a mixture of business, industrial, and warehouse uses while also providing for specialised retail uses that require a large floor area, in a location that is well served by transport systems. The site is visually prominent, located on the intersection of two primary access roads to Taree.

Some existing industrial and business uses are operating from a small section of the Business Park. The Manning River Business Park will be developed in several stages in line with demand for industrial land.

An area of mature bushland forms part of the subject site, the majority of which has been zoned E2 Environmental Conservation. Apart from its conservation values, the native vegetation also serves as a visual buffer to the Bucketts Way.

L7.1.1 Boundaries of the site

All land within the site known as Manning River Business Park and shown on Figure 13.

L7.1.2 Relationship to other parts

All standard relevant provisions from Parts A – K apply, however where there are any inconsistencies with this Part, the controls of this Part prevail.

L7.1.3 Principle objectives for the site

The principle objective is to ensure the delivery of land to accommodate key business and industrial development and investment in the Greater Taree LGA.

Objectives

- To establish the role of the Manning River Drive Business Park as an important employment generator providing for a range of new business and industrial opportunities to meet immediate and longer term employment demand;
- To ensure the timely and efficient release of land that makes provision for necessary infrastructure and environmental management;
- To provide for an appropriate road hierarchy within the site to ensure development does not adversely impact on the function, efficiency and safety of the surrounding road network, particularly Manning River Drive and The Bucketts Way;
- To provide a major internal service road and controlled intersections to Manning River Drive and The Bucketts Way;
- To limit direct access to new development from Manning River Drive and The Bucketts Way;
- To ensure the orderly provision of services and infrastructure to meet the needs of future development;
- To ensure the visual amenity of future development is conducive to establishing the site as an attractive gateway to Taree;
- To ensure provision is made for industrial and business activities requiring a variety of lot sizes to accommodate a range of land uses and building forms;
- To ensure that environmentally sensitive land is adequately conserved and protected.

L7.1.4 Desired future character statement

The Manning River Drive Business Park is to be developed as a modern and attractive business enterprise precinct providing opportunities for a range of businesses.

Businesses fronting the gateways of Manning River Drive and the Bucketts Way, and the internal Primary Access Road are to exhibit a higher visual standard through superior building design, building setbacks and site landscaping. Businesses not requiring main road exposure will be more favorably accommodated on allotments serviced by secondary roads.

Large building forms will be required to use setback, articulation, colour and landscaping in their design to ensure the desired future character is achieved. A mix of industrial/commercial land-uses, including light industry, bulky goods and commercial use buildings are to be encouraged. Development proposals are to support a positive environment by providing a balance between built form and un-built areas.

Environmentally sensitive stormwater management systems will be required throughout the Business Park in order to improve the quality, and to manage the quantity, of stormwater runoff. A large area of native bushland in the site's south is to be conserved and is to be augmented to provide a strong visual buffer to the Bucketts Way.

L7.2 Subdivision, building & streetscape design

Explanation

A rational and functional subdivision pattern is crucial to the successful development of the Business Park. Figure 13 provides a conceptual road hierarchy and preliminary lot layout which serves to ensure this can be achieved.

The siting and design of individual building forms has a significant impact on the overall outcome of how the streetscape will present over time. Council will be seeking high quality presentation and design standards for buildings, in particular for those facing the Primary Access Road, Manning River Drive and The Bucketts Way.

L7.2.1 Subdivision

Objectives

- To ensure that lots are of a size that can accommodate a variety of future potential uses;
- To ensure lots are of a size to enable adequate area for truck turning areas, parking areas, landscaping and buildings;
- To prevent undesirable fragmentation that may result in the inefficient use of the land;
- To ensure that Aboriginal cultural heritage is considered in the final subdivision design.

Performance criteria

1. The location and design of the primary access road will be consistent with the map in Figure 13. Future subdivision designs shall incorporate other access roads generally in the locations shown on Figure 14, depending on market demands.
2. New building development is to be located to avoid the proposed access road locations and designed to provide access to them in preference to Manning River Drive or The Bucketts Way. No newly subdivided allotments will have direct access to Manning River Drive or The Bucketts Way.
3. The development of the Business Park is to proceed progressively in a staged manner as demand for industrial land so warrants. The staging plan in Figure 14 provides a guide to the anticipated progressive development of the Business Park.
4. Allotments will be of a size and shape to ensure future buildings can be constructed in accordance with the provisions of this DCP.
5. The size of allotments will be determined by market forces, but it would be anticipated that few lots would have areas less than 2000m². Where lots are less than this area, justification as to how the proposal meets the DCP's objectives are to be provided.
6. Water, sewer, underground power and telecommunication infrastructure is to be supplied to all allotments.
7. Refer also to Parts L7.2.7, L7.3, L7.4 and L7.5 of this DCP for specific site planning provisions relevant to subdivision.
8. An Aboriginal Cultural Heritage Assessment will be undertaken in accordance with the National Parks and Wildlife Act 1974.

L7.2.2 Building setbacks

Objectives

- Street setbacks are a means of providing building security, and also have a significant impact on the character of a streetscape. Appropriate setbacks provide opportunities for site access, carparking and landscaping commensurate with the scale of the building form proposed.

Performance criteria

1. The minimum front building setback is 10m to Manning River Drive, The Bucketts Way, and the internal Primary Access Road as shown on Figure 13. The setback to other roads on Figure 13 is 8m.
2. The first 5m of the front setback is to be set aside for landscaping.
3. Setbacks to a secondary street can be reduced to 5m where it can be shown that landscaping meets the performance criteria of this DCP.
4. The minimum rear and side setback for all buildings is 3m or the required distance compliant with operational requirements and which meets the provisions of the Building Code of Australia.
5. Concessions to setbacks may be considered as per the performance criteria set down in Part K4.1 of the DCP.

L7.2.3 Building height

Objectives

- To minimise the visual impact of the height, bulk and scale of proposed buildings and structures, ensuring a high quality appearance is achieved when the development is viewed from the public domain.

Performance criteria

1. Any building proposed in excess of 8.5m in height must not be out of scale with its immediate environment.
2. Satisfactory provision is to be made for landscaping of the site to a scale commensurate to the height of the proposed building form, such as the inclusion of taller, and semi-advanced tree species in the landscape plans to accompany the Development Application.

L7.2.4 Site layout, building design and materials

Objectives

- To ensure buildings are visually compatible with the functions of the zone and provide a positive aesthetic contribution to the gateways into Taree;
- To ensure development is sympathetic with the surrounding natural environment;
- To ensure development at the entry point from Manning River Drive creates a sense of entry to the business park;
- To ensure development presents a co-ordinated aesthetic appearance.

Performance criteria

1. Buildings which are visible from Manning River Drive, The Bucketts Way and the Primary Access Road shall incorporate superior architectural design and finishes, landscape design, and/or some façade articulation, so as to create visual interest. Detailed design plans, including all elevations, landscaping and signage are to be submitted with the Development Application.
2. Buildings, external storage and car parking areas are to include softening landscaping elements for elevations along Manning River Drive, The Bucketts Way and the Primary Access Road in such a manner as to mitigate adverse visual impacts of commercial/industrial land use activities.
3. Bulky goods retail outlets and service related uses are to be generally focused along the internal roads with open car parking areas located at the front of these sites.
4. Built form is to otherwise comply with the objectives and provisions of Part K of the DCP.

L7.2.5 Signage

Objectives

- To ensure signs do not proliferate to an extent that detracts from the aesthetic quality of the business area and surrounding natural landscape;
- To ensure signs are integrated and are compatible with the building design and colour schemes of the development they accompany;
- To ensure the size and scale of signs is in proportion to the size and scale of buildings.

Performance criteria

1. Manning River Drive Business Park entry signage is to be established at the intersections of the Primary Access Road to Manning River Drive and The Bucketts Way with the first applications to develop that land. Such entry signage is to be of a high design standard reflecting the quality of development within the business park.
2. All individual advertising sign proposals are to accompany the Development Application for their respective buildings/land-use activities, and are to be integrated with the design of the building to which they relate.
3. All individual advertising sign proposals are to otherwise comply with the provisions of Part K of this DCP.

L7.2.6 Security, fencing and storage

See Part K4

Additional Performance criteria

Outdoor storage activities

1. Any outdoor storage areas are to be screened by fencing and landscaping.
2. No outdoor storage areas are to be permitted within the front building setback.

Security Fencing

1. Where sited forward of the building frontage to a public road, security fencing is to be black coated or painted.
2. Solid boundary fencing materials will only be permitted forward of the building frontage to a public road where they can be shown to be screened by landscaping in accordance with Part L7.2.7. Such fences are to be of high quality materials that integrate with the building design and advertising signage and contribute positively to the streetscape.

L7.2.7 Landscaping

See Parts K & N of DCP 2010.

Additional Performance criteria

1. Any development with a frontage to Manning River Drive and the Primary Access Road is to include landscaping plans which provide for a contiguous gateway theme along both Manning River Drive and the Primary Access Road comprising an avenue of Illawarra Flame Trees. Such trees are to be planted at a minimum trunk spacing of 10m, setback 3m from the kerb. Full details are to be submitted with the development application for subdivision.
2. Development of other internal access roads is to include planting of a consistent street tree species selection creating a theme through these secondary roads. Council's environmental officers are to be consulted on selection of species. Such trees are to be planted at a minimum trunk spacing of 10m, setback 3m from the kerb. Full details are to be submitted with the development application for subdivision.
3. In addition to the landscaping requirements of Part N, all street frontages of new buildings are to be planted with a low contiguous hedge, allowing for driveway access points. A flowering Westringia species is preferred.
4. The strip of E2 zoned land adjacent to the The Bucketts Way (proposed Lot 101 of Figure 13) is to be planted with native trees to provide a natural habitat linkage while allowing for minimum engineering requirements for sight distances at the intersection. Trees are to be selected from a list of Koala Food trees indigenous to the area, with full details submitted with the development application for subdivision. Council's environmental officers are to be consulted on final species selections.
5. Turfing on each site should utilize drought and frost resistant species.

L7.3 Traffic management

Objectives

- To provide for an internal road network and system of pedestrian and cycleways that integrates with the Business Park providing an acceptable level of access, safety and convenience for all future users. The site is to have limited and controlled access to Manning River Drive and The Bucketts Way.

Performance criteria

1. The roundabout at the intersection of the Primary Access Road and Manning River Drive is to make provision for the future construction of a service road along the eastern side of Manning River Drive, generally as shown in Figure 13. Full details are to be submitted with the first application for development which relies on this intersection's construction.
2. The roundabout at the intersection of the Primary Access Road and The Bucketts Way is to integrate with, and make provision for the upgrade of the intersection to the Taree Saleyards to the south. Full details are to be submitted with the first application for development which relies on this intersection's construction.
3. All future subdivision designs are to generally reflect the road hierarchy in Figure 13.
4. The Primary Access Road is to be designed to function as a bus route and is to feature a combination of on-road cycleway and off-road pedestrian pathways on both sides of the road.
5. Road widths are to be in accordance with Council's adopted road design standards as set out in Part C3.2.
6. Roads are to be designed to accommodate the movement of B-Double vehicles.
7. Access to Lot 3 DP 862928 may continue to rely on access via this lot's existing connection to The Bucketts Way.
8. Access to all other allotments is to be obtained solely from internal roads. This shall include access to any residual rural properties at the time that an internal road has been constructed to the boundary of these allotments.
9. Provision is to be made for the connection of future vehicular access to the land to the west identified as Future Employment Lands in the Department of Planning and Infrastructure's Mid North Coast Regional Strategy, as generally shown in Figure 13.

L7.4 E2 Environmental conservation zone

Objectives

- To protect, manage and restore areas of high ecological and aesthetic values, and to prevent development that could destroy, damage or otherwise have an adverse effect on those values.

Performance criteria

1. The E2 zoned land is not to be further subdivided and thus fragmented by future development.
2. All developments on land which contain the E2 Environmental Conservation zone will require the lodgement of a Vegetation Management Plan (VMP) at the time of lodging a DA.
3. The Vegetation Management Plan for the E2 lands is to be undertaken in consultation with Council and meet the following objectives:
 - Retain areas of important value and of locally significant vegetation;
 - Achieve environmental protection;
 - Supplement the Koala food tree plantings within this area;
 - Augment and re-populate the visual screen for that land located to the east of the Bucketts Way intersection;
 - Incorporate the establishment and management of the corridor of Koala Food Tree Plantings west of the Bucketts Way intersection as per Part L7.2.7.
4. The approved VMP works shall be completed to Council's satisfaction prior to the issue of the subdivision certificate and/or occupation certificate.

L7.5 Water management

Objectives

- The development area drains into two catchments and it is important that stormwater runoff from urban development does not adversely affect downstream receiving waters. Water management requirements and other restrictions may impact on the conceptual layout illustrated in Figure 13.

Performance criteria

1. Subdivision of land is to be compliant with the provisions of Part C of the DCP.
2. Development within the precinct is to be consistent with the stormwater management principles generally represented in.
3. An individual Stormwater Management Plan is to be prepared for each site's development, and shall accompany the development application for subdivision and/or industrial/commercial building.

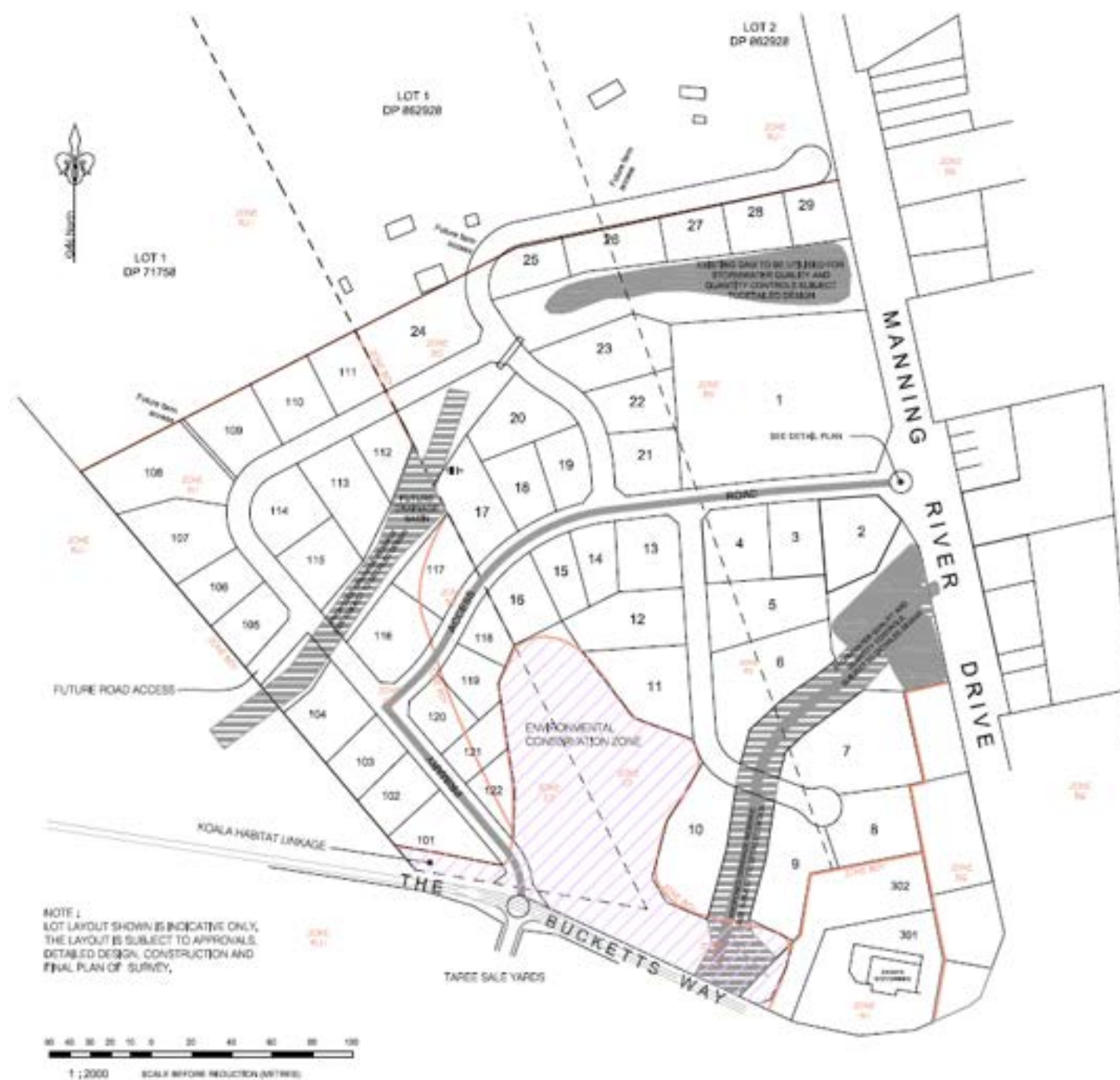


FIGURE 7.1 GENERAL LAYOUT PLAN



Figure 13 – General Layout Plan

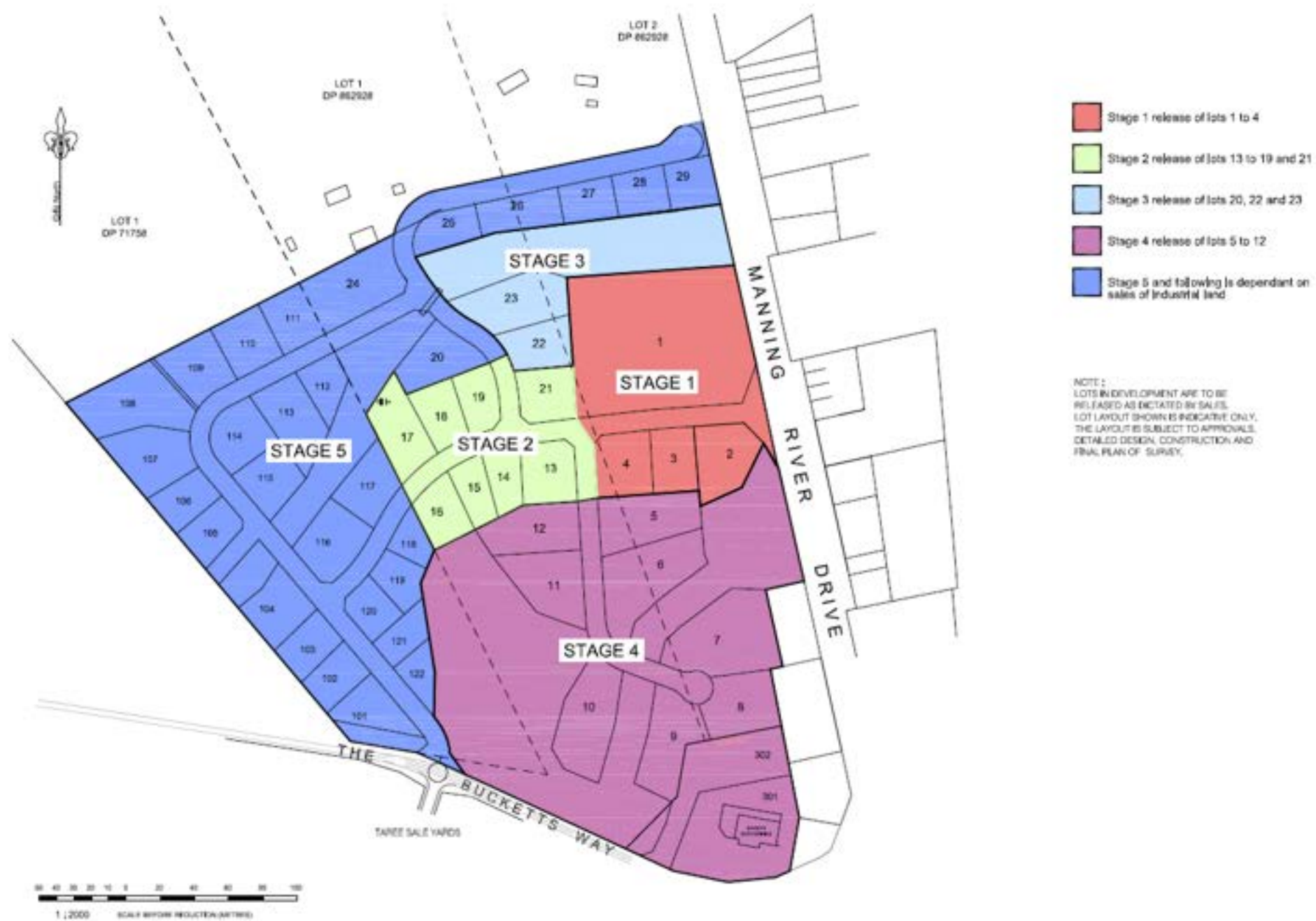


FIGURE 7.2 PRELIMINARY STAGING PLAN

Figure 14 – Preliminary Staging Plan

L8 310 – 314 Diamond Beach Road, Diamond Beach

About this part:

This part provides detailed guidelines for the area of 310-314 Diamond Beach Road, Diamond Beach. This Part applies in addition to the requirements of Parts A – K of the DCP.

Applies to:

All land within the site shown in Figure 15.

Date adopted by Council:

21 March 2012

Effective date:

18 January 2013

Related Policy / Technical Manual:

Nil

L8.1 Introduction

The subject site is located at 310-314 Diamond Beach Road, Diamond Beach and has an area of 8.4Ha. The site is bordered by Hallidays Point Public School to the south, Diamond Beach Holiday Park to the east and rural residential properties to the north.

The site is considered infill development as it is located in the Diamond Beach village and is surrounded by existing residential uses. Future residential development of the site will provide the missing link in road connections providing the community with better access to the school, playing fields, shops and the beach.

Future residents will provide support for local services and facilities such as the school and shops and will utilise existing infrastructure.

L8.2 Boundaries of the site

All land included in Lot 6 DP 244030 and Lot 9 DP 250425 at 310-314 Diamond Beach Road, Diamond Beach and shown in Figure 15.



Figure 15 – 310-314 Diamond Beach Road, Diamond Beach

L8.3 Relationship to other parts

L8.4 Principle objectives for the site

Objectives

- Ensure environmental constraints over the land are managed appropriately so as to minimise impacts.
- Enhancement and appropriate ongoing management of the land included in the Environmental Conservation zone.
- Provide permeability through the site for residents and neighbours.

L8.5 Performance criteria

1. The subdivision and staging being undertaken generally in accordance with Figure 16.
2. Demonstrate that stormwater can be managed through the use of detention basins and stormwater quality improvement devices. Detailed examination will be required at the subdivision stage regarding the size, volume and detail of these basins to deliver no net impact from stormwater off-site. This may result in some minor changes to the layout of the lots in the vicinity of the stormwater basins.
3. Given the environmental value of land included in the Environmental Conservation zone, this land must remain in single ownership to minimise disturbance of the site. This land must form part of one of the adjoining residential lots. Any house proposed on this lot is not to be located on land included in the Environmental Conservation zone.
4. No public beach access is permitted through the land included in the Environmental Conservation zone.
5. A Vegetation Management Plan (VMP) must be lodged with the subdivision application and will show how land included in the Environmental Conservation zone can be rehabilitated. Rehabilitation works provided in the VMP, such as weed control and revegetation, must be completed prior to the registering of the first stage of the subdivision. The VMP is to be registered on the title of the land.
6. When clearing vegetation or undertaking earthworks ensure that representatives of the registered Aboriginal party are available to monitor works and identify the presence of artefacts or cultural materials that are important to the Aboriginal community. Appropriate approvals are to be sought for any identified artefacts or materials.
7. Undertake the following vegetation management measures:
 - retention of the fig tree in the south-west corner of the site as identified in Figure 16, and inclusion of a restriction as to user under S.88B of the Conveyancing Act 1919 on any future lot that retains this tree within its area to ensure its protection;
 - where possible, retain Swamp Mahoganys on the site within the plan of subdivision. Details are to be submitted with the subdivision application;
 - any clearing of the site is not to be undertaken during the breeding season of the Rufous Fantail to minimise impacts (mid-September to April).
8. The subject site was previously used for agriculture and associated dwelling which may potentially have resulted in contamination by pesticides, herbicides, hydrocarbon spills and asbestos within the vicinity of the dwelling location. Surface soil sampling is required at this location to determine the presence of contaminants and any remediation requirements, to ensure that the land is suitable for residential development and occupation. A report outlining these findings and remediation works is to be submitted with the subdivision application. Any remediation works are to be completed prior to the subdivision certificate being issued.

9. Ensure the site is permeable by providing the road layout and pedestrian/cycle connections generally in accordance with Figure 16 to enable connections and road infrastructure as follows:
 - between Edgewater Drive and Anniversary Drive, including the construction of a pedestrian/bicycle path,
 - a loop road layout to the west that enables easy movement through the site (limited cul-de-sacs),
 - pedestrian connection to Diamond Beach Road,
 - pedestrian connection to the school, subject to agreement with the Department of Education,
 - to assist with traffic calming, contrasting threshold treatments are to be incorporated along the connecting road between Edgewater Drive and Anniversary Drive at its intersections with Road Nos 2, 4 & 6 in the layout illustrated in Figure 16. Details are to be submitted with the subdivision application.
10. Investigations are required to determine the extent of acid sulfate soils on the subject site and if required, appropriate remediation works are to be implemented. A report detailing the acid sulfate soil findings and remediation is to be submitted with the subdivision application. Any remediation works are to be completed prior to the subdivision certificate being issued.
11. A co-ordinated boundary fencing treatment is to be incorporated for the perimeter of each stage of the subdivision at the sole cost of the developer. Full details are to be submitted with the subdivision application.

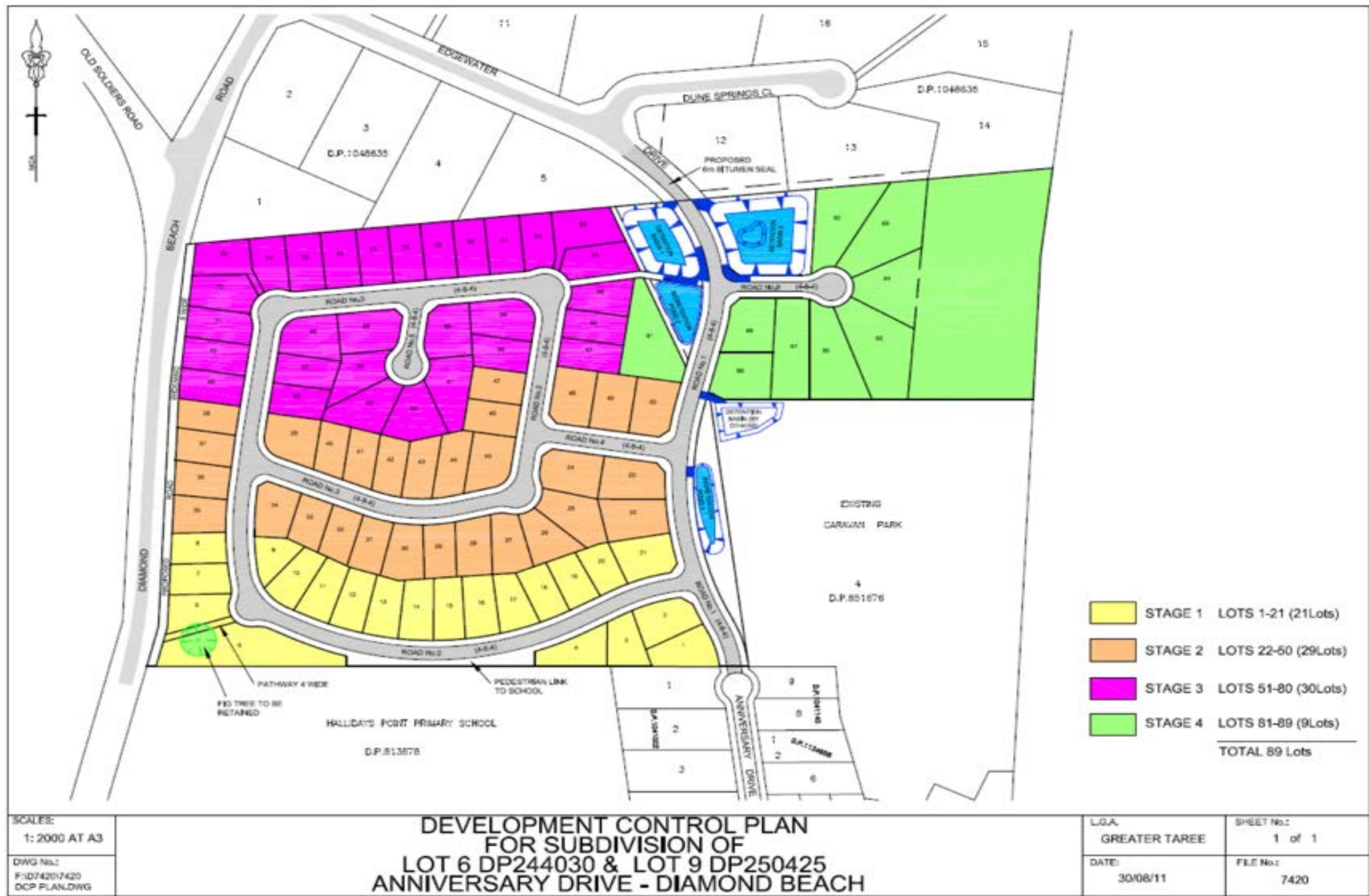


Figure 16 – Conceptual layout

L9 Figtrees on the Manning

About this part:

This part provides detailed guidelines for the area of Figtrees on the Manning mixed residential, tourist, commercial, open space and marina development. This Part applies in addition to the requirements of Part C – Subdivision Requirements & Appendices A and B.

Applies to:

Lots 1 and 2 DP 804829, Lot 1 DP 243828, Lots A and 1 DP 343913, Lots 1 and 2 DP555702, Lots 27 to 29 and 31 DP 20200, Lots 35 to 36 and 38 to 39 DP 24505, Lots 12 and 15 to 16 DP 703272, Lots 1 and 2 DP 215485, Crown Reserve 037-3070 and Reserve 1011448, Pitt Street Chatham.

Date adopted by Council:

3 February 2010

Effective date:

24 December 2010

Related Policy / Technical Manual:

Appendices A (Master Plan) and B (Concept Approval).

L9.1 Introduction

Figtrees on the Manning represents a unique opportunity in Taree to create a major and vibrant mixed use development that will help to consolidate Taree as a major regional centre.

There will be a range of development outcomes including commercial and retail outlets, residential units, modern adaptive reuse of some of the old dairy factory buildings on site, and a commercial marina. The commercial marina and boatel will encourage boating use of the Manning River.

Overall the vision is to create a distinctive and vital urban redevelopment area with a quality public domain while optimising the utilisation of the waterfront location.

L9.2 Relationship to other parts

All standard relevant provisions from within this DCP apply where not varied by this part.

L9.3 Boundaries of the site



Figure 17 – Boundaries of site

L9.4 Principle objectives for the site

- Provide a mix of landuses that will drive development of the site and achieve good private and public landuse outcomes.
 - Ensure that redevelopment of the site will provide essential connections to Taree CBD as a regional centre, the adjacent residential precinct and the natural features of the site.
 - Create a high quality public domain.
- Optimise utilisation of the waterfront location.

- Maximise the benefits of adaptive re-use of existing buildings and infrastructure on the site.
- Create building forms and envelopes that will achieve economic development and maximise amenity on the site and in the neighbourhood.
- Achieve an appropriate scale of development.
- Provide for and encourage boating activity.
- Effectively and efficiently provide transport facilities for cars, pedestrians and cyclists.
- Incorporate and demonstrate environmental sustainability and energy efficiency.
- Create a great sense of place in the design, and qualities in the development outcome.
- Achieve high quality aesthetics, liveability, and desirable lifestyle choice.

L9.5 Performance criteria

Refer to Appendices A and B of this DCP for performance criteria and prescriptive controls that apply to development of the site.

L10 Northern Gateway Transport Hub

About this part:

This part provides detailed guidelines for the land located at Cundletown which has been rezoned for transport related industry and development. This Part applies in addition to the requirements of the DCP.

Applies to:

All land within the site shown in Figure 18 and identified as Lot 1 DP 1098686, Lot 1 DP 733715, Lot 2 DP 733715, Lot 16 DP 613107, Lot 681 DP 617842, Lot 1 DP 1139255, and Lot 1 DP 1267710, being 1, 3, 16, and 39 Emerton Close and Lot 1, Lot 16 and Lot 681 Denison Street Cundletown.

Date adopted by Council:

28 October 2020

Effective date:

11 December 2020

Related Policy / Technical Manual:

NIL

L10.1 Introduction

The subject land is located at the northern end of Cundletown, adjacent to the northern interchange of the Pacific Highway with Taree and between the Taree Regional Airport and the highway. This location has been identified as a transport hub for Taree and surrounding areas, which will facilitate economic activities supporting transport related development, as well as providing opportunities for industry which requires access to road and/or air transport.

The subject land is relatively free of environmental constraints, however some controls are required to ensure appropriate outcomes in terms of visual amenity, traffic impacts, environmental impacts, rural access, acoustic impacts, flooding and being in proximity to the airport.

L10.2 Boundaries of the site

There are two stages to the Northern Gateway as indicated in the map in the Figure below.



Figure 18 – 1, 3, 16 and 39 Emerton Close and Lot 1, Lot 16 and Lot 681 Denison Street Cundletown

L10.3 Relationship to other parts

All standard relevant provisions from within this DCP apply to development on the subject land where not varied by this part.

- Provide a well landscaped visual gateway into Cundletown when viewed from both the Pacific Highway and Princes Street.
- Ensure the amenity of neighbouring areas are not unduly impacted by the proposed development.
- Manage traffic generated from the site to minimise impacts on the local road network and access to the Pacific Highway.
- Ensure that development addresses the flood constraints of the site and its proximity to the Taree airport.
- Ensure the environmental values of the site are protected and enhanced.
- Maintaining the rural production activities

L10.5 Performance criteria

Landscaping:

1. A landscaping plan is to be lodged with any development application and must address the following requirements in the locations indicated in Figure 19:
 - screen the buildings and activities being undertaken on the site when viewed from the Pacific Highway and future Cundletown Bypass. This vegetation screen is to include mixture of large trees (over 10m high in maturity) and

shrubs that are planted to an appropriate density and maturity to visually obscure the development from the Pacific Highway and Cundletown Bypass. The planting schedule is to provide a natural bush setting common along the Pacific Highway and be concentrated in locations where there is potential for high visual impacts. This landscaping can supplement, but not rely solely on existing native vegetation located within the Pacific Highway road reserve or adjoining the proposed Cundletown Bypass

- provide gateway landscaping into Cundletown. This site is the northern access to Cundletown, Taree and the surrounding Manning Valley. Gateway landscaping is to be of a high visual quality and include feature trees, a mixture of flowering/colourful shrubs and ground cover. The landscaping is to provide an interesting mixture of colour and vegetation type that provides a focal point in the streetscape. Gateway landscaping can include a more formal garden setting and aims to filter the view to the proposed development rather than screen
- visually enhance the acoustic measures proposed along the Emerton Close frontage. Landscaping is to break-up and enhance the view to the acoustic fence to reduce the bulk and scale of the acoustic fence by using a mixture of vegetation height and colour. Landscaping should be provided at two tier levels, at ground level and on the mound.

The landscaping plan is to:

- provide an initial maintenance regime during its establishment and an on-going maintenance regime following completion of development
- ensure effective landscape outcomes at the time the use commences through planting semi-advanced or rapid growing species and to an appropriate density. To achieve this outcome, landscaping should be implemented early in the development of the site.

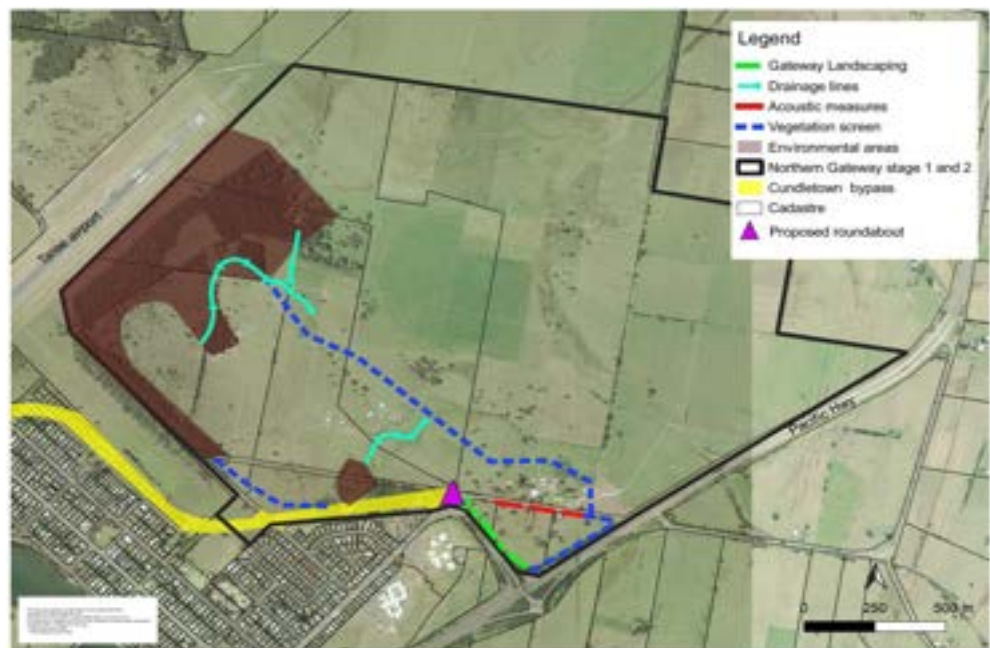


Figure 19 – location of landscaping, acoustic and traffic measures

Acoustic measures:

2. Stage 1 - where a truck depot is proposed on-site the following acoustic measures are to be provided to minimise impacts on nearby sensitive land users:

- the workshop, freight handling depot and truck wash is to be enclosed within sheet steel buildings, each with an R 1.5 insulation blanket fitted under the roof in accordance with manufacturers' instructions.

3. For Stage 2 and any other use proposed in Stage 1, a noise impact assessment is to be undertaken to demonstrate how impacts on nearby sensitive land uses will be minimised.

Traffic:

4. A roundabout is required at the intersection of Emerton Close and Manning River Drive/Princes Street to accommodate the future Cundletown Bypass, the Stage 1 transport hub and traffic entering Cundletown.
5. Access to Stage 2 is to be via the Cundletown Bypass.

Flooding:

6. Stage 1 - minimise the impacts of flooding in the eastern portion of the site (adjoining the Pacific Highway) by ensuring the flood constrained areas are not built upon with any enclosed buildings. Any structures are to be open structures which will not limit flood water passage across the site, and are designed to withstand

likely flood forces. Suitable uses may include parking and manoeuvring areas for heavy vehicles.

7. Stage 2 - undertake a hydrological assessment which addresses the extent of fill, maintenance of watercourses through site, the retention of the ecological values of environmental areas, and how flooding impacts will be addressed.

Proximity to the Taree Airport

8. Ensure the relevant airport guidelines are addressed to minimise impacts on the operation of the Taree airport (e.g. lighting).

Access for rural activities

9. Access to low flood risk land for rural activities needs to be maintained for Stage 2 to ensure that suitable land is available on which to build rural infrastructure (e.g. farm sheds or dwelling) and to hold or move livestock during floods.

Environmental improvements

10. Undertake a vegetation management plan for the environmental areas and drainage lines that feed into the conservation areas in Stage 2. The objectives of the plan are to:
 - protect existing remnant native vegetation
 - plant new vegetation to enhance the vegetation community
 - encourage the regeneration of native vegetation
 - control invasive weeds
 - maintain and improve drainage lines that feed into the environmental areas
 - minimise the impact of the development on the native vegetation; and
 - perform monitoring and maintenance activities to ensure that implementation of the mitigation measures is adequate and a satisfactory restoration outcome is achieved.

Regeneration

The regeneration of the habitat should be undertaken by promoting natural ecological processes under an assisted natural regeneration regime with the aim being to accelerate, rather than replace, natural successional processes by removing or reducing barriers to natural regeneration such as impacts on drainage, soil degradation, competition with weedy species, and edge impacts.

For the purposes of assisted natural regeneration of the habitat, the following measures should be undertaken:

- avoid further unnecessary disturbance of the remnant vegetation communities;
- undertake appropriate weed control measures;
- supplement plantings and allow natural regeneration of plants including groundcover, understorey and canopy; particularly koala food trees and
- install temporary or permanent fencing between the land the subject of the Vegetation Management Plan to control access during regeneration.

L11 - Lot 612 Blackhead Rd, Hallidays Point

About this part:

This part provides detailed guidelines for development of the land located in the south western section of Tallwoods village which has been rezoned for residential development. This part applies in addition to the other requirements of the DCP.

Applies to:

Land within the site shown in Figure L11.1 and identified as Lot 612 DP 1160096, being Lot 612, Blackhead Road, Hallidays Point.

Date adopted by Council:

14 February 2018

Effective date:

This DCP will become effective upon gazettal of Amendment No 13 to Greater Taree Local Environmental Plan 2010

Related Policy / Technical Manual:

Nil

L11.1 Introduction

The subject land is located in the south western part of the Tallwoods village in the Hallidays Point area. This land has been identified to provide residential growth of the Tallwoods village.

Future development of the subject land is to ensure that environmental and visual objectives are maintained and enhanced; and an effective road network is achieved.

L11.2 Relationship to other parts

All standard relevant provisions from within this DCP apply to development on the subject land where not varied by this part.

L11.3 Principle objectives for the site

- Ensure that the ecological values of the site (wetland and woodland vegetation) are maintained and enhanced.
- Enhance the vegetated buffer along the frontage of Blackhead Road to visually screen the road for future residents.
- Ensure an effective and efficient road network is achieved.

L11.4 Performance criteria

Ecological and landscape values:

- 11.A vegetation management plan is to be lodged with any development application and must address the following requirements in the locations identified in Figure 20:

- improvements to the Environmental Protection Area to enhance the ecological (wetland and woodland) values of the site by:
 - maintaining the surface water regime (current hydrological pattern and volume) that feeds into the wetland
 - avoiding disturbance of the remnant plant communities, particularly the wetland community
 - implementing appropriate weed control measures
 - promoting natural regeneration of native plants including groundcover, understorey and canopy
 - installing permanent fencing to control access
- establish a vegetated buffer along the Blackhead Road frontage which is a minimum of 10 metres wide and planted with native species
- provide offset planting to compensate for the loss of vegetation associated with the development. The offset planting is to be provided in the Environmental Protection Area and vegetated buffer and must be:
 - provided at a ratio of 2 trees for each native tree that is removed. At the time of lodgement of the development application an inventory of trees is to be undertaken to determine the number required. The number of trees present on the site may change over time. The minimum number of trees to be considered in this offset ratio is 70 trees (present on the site at the time of the land being rezoned)
 - of the same species as the native trees being removed (representative of the dry sclerophyll forest vegetation community)
 - appropriately managed to ensure an 80% survival rate after 12 months and replacement planting where required.

The vegetation management plan is to:

- provide a maintenance regime to ensure the ecological and landscape objectives are maintained. To achieve this outcome, the vegetation management plan should be implemented early in the development of the site
- ensure effective ecological and landscape outcomes at the time the use commences through the planting of local native tube stock and at an appropriate density
- be registered on the title of the affected land through a Section 88b instrument under the Conveyancing Act 1919.

12. Land included in the Environmental Protection Area, must remain in single ownership to minimise disturbance of the site. This land must form part of one of the adjoining residential lots. Any construction proposed on this lot is to be located outside of land included in the Environmental Protection Area.

13. Ensure the water quality of the site is maintained or improved.

Traffic:

14. Vehicular access to/from the site will be via southern extension of The Pulpit. Provision will be made in any subdivision of the land for public road connections to Lot 62 DP 1077935 (east) and Lot 1 DP 242332 (west) to facilitate access for future development of those lands.

No vehicular access is to be provided directly to Blackhead Road, other than restricted emergency access to enable residents and emergency services access during bushfires.



Figure 20 – Site plan

L12 Glenthorne Employment Area

About this part:

This part provides detailed guidelines for land located at Glenthorne which has been rezoned for industry, business and environmental conservation. This Part applies in addition to the other requirements of the DCP.

Applies to:

All land within the site shown below in Figure 12.1.

Date adopted by Council:

28 July 2021

Effective date:

This DCP will become effective upon gazettal of Amendment No 1 to Greater Taree Local Environmental Plan 2010

Related Policy / Technical Manual:

Nil

L12.1 Introduction

The subject land is located at Glenthorne on the southern entry into Taree, close to the southern interchange of the Pacific Highway. This land, adjacent to a significant koala habitat site has been identified as a suitable location for an extension of the Manning River Drive employment precinct. It will facilitate additional economic activity within the precinct as well as providing opportunities for business and industry which require efficient access on to the Pacific Highway. Site specific controls are required to ensure appropriate development outcomes.

L12.2 Boundaries of the site



Figure 12.1 Subject Land

L12.3 Relationship to other parts

All standard relevant provisions from within this DCP apply to development on the subject land where not varied by this part.

L12.4 Principle objectives for the site

- To provide an active and visually appealing southern gateway into Taree through quality design and landscaping.
- To ensure that the release of land provides the necessary services, infrastructure and environmental management.
- To provide a road hierarchy within the site to ensure that development does not adversely impact on the function and efficiency of Manning River Drive.
- To facilitate the movement of koalas through the important habitat site and ensure that environmentally sensitive land is protected and enhanced.

L12.5 Performance criteria

Gateway Landscaping and Design:

A site-specific landscaping plan is to be lodged with development applications (excluding subdivision applications) for lots fronting Manning River Drive. The landscaping plan must achieve the following:

- Only low native vegetation is to be planted along the frontage with Manning River Drive to prevent visually obscuring the development from Manning River Drive. Gateway landscaping should soften and filter the view to the proposed development rather than screen it. Buildings on lots fronting Manning River Drive are to address Manning River Drive and ensure an active frontage along Manning River Drive. Large, blank areas of wall or storage areas fronting Manning River Drive are not acceptable.
- No solid fence will be permitted forward of the building line for lots fronting Manning River Drive.
- Gateway landscaping is to include a mixture of low-maintenance flowering native shrubs and ground covers. The landscaping is to provide an interesting mix of colour and native vegetation types that provide a focal point to the entry.
- Gateway landscaping within lots fronting Manning River Drive is to include Aboriginal designs which can be viewed from Manning River Drive and must create respectful, and culturally and geographically relevant formal gardens.

Gateway Signage:

- An estate entry signage is to be established on the corner of the lot closest to the intersection of Glenthorne Road and Manning River Drive. Such entry signage is to be of a high design standard incorporating natural materials and colours and using a theme that is specific to Taree's culture and heritage. Such a sign must be softly lit at night using only low-glare lights with minimal light spill.

Biodiversity and Native Vegetation Management:

As a part of any development over Stages 2 and 3 of the site:

- Environmental reserves are to be planted with local koala feed trees to establish forested buffer zones and create a connection with adjoining habitat to the east.

- A vegetation management plan (VMP) must be lodged with the first development application for each stage of the development. The VMP must be prepared to Council's satisfaction and must detail measures to maintain or improve the environmental value of the E2 Environmental Conservation zone areas, including responsibility for ongoing management, ownership, protection and maintenance.
- Any VMP for the site is required to undertake targeted surveys for the following species:
 - *Zannichellia palustris*
 - *Pterostylis chaetophora*
 - *Persicaria elatior*
 - *Maundia triglochinos*
 - *Lindernia alsinoides*
 - *Asperula asthenes*
 - Any threatened red gums.
- Passive traffic speed control measures are to be incorporated into the design of any internal roads to minimise the risk to koalas of vehicle strike. Such measures are also to be taken into account in Glenthorne Road.

Stormwater Management:

- Stormwater drainage systems are permitted to be located within the E2 Environmental Conservation zone areas of the site.
- Each future lot is to provide its own water quality treatment and on-site detention in accordance with a site-specific stormwater management plan that is to be lodged with each development application for specific uses on the lot. Such water quality treatment and on-site detention is to be incorporated into landscaping features associated with the development. Generally, not less than 5% of each development lot shall be dedicated for stormwater treatment and landscaping.

Active Transport:

- Provision for cycle-ways shall be made linking Manning River Drive and Glenthorne Road
- All developments are to be provided with bicycle parking and associated end-of-trip facilities such as showers and lockers to encourage workers to cycle to work.

Security Fencing:

- Solid boundary fencing materials will only be permitted forward of any building frontage to a public road (excluding Manning River Drive) where they can be shown to be screened by landscaping. Such fences are to be constructed of materials that integrate with the building design and advertising signage and contribute positively to the streetscape.

Site Specific Setbacks:

- A building setback of not less than 5m must be provided along the western boundary of the site where it adjoins Eriksson Lane opposite Lot 102 DP1118846, unless justified by a site-specific acoustic assessment demonstrating that acoustic impacts are acceptable on the nearby caravan park. This

provision is only relevant whilst a caravan park continues to operate on Lot 102.

Staging and Road Hierarchy:

- Staging of development of the land shall be generally undertaken in accordance with the staging plan shown below in Figure 12.2.
- No new development as part of Stage 1 shall have direct egress (exit) on to Manning River Drive. Only one ingress (entry) from Manning Drive is permitted as part of the Stage 1 development. All traffic exiting the site from stage 1 of the development is to exit via Glenthorne Road.
- Stage 2 of the development is to include a road to the west linking Manning River Drive through Lot 203 DP 1202481.

Servicing:

- All development within the site shall be supplied with underground power and telecommunication infrastructure.
- A water and sewerage servicing plan is to be lodged with any development application for each stage of the development. Such a plan is to demonstrate that all development is able to be connected to Council's reticulated water and sewerage network and the methods of connection thereto.

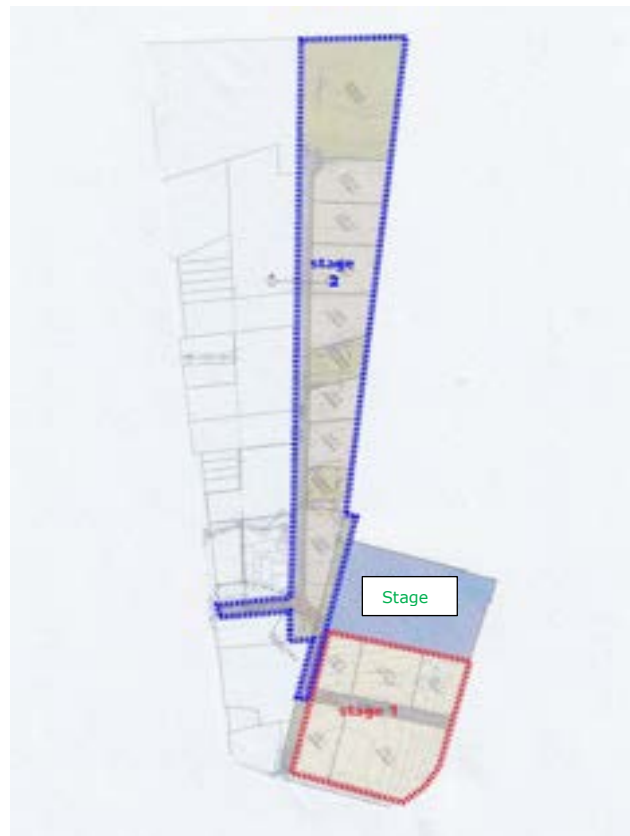


Figure 12.2: Development Staging
NB: Concept Subdivision and Road Layout Plan only

Part M

Site Waste Minimisation and Management



Greater Taree
CITY COUNCIL

PART M SITE WASTE MINIMISATION AND MANAGEMENT

Contents

M1	General.....	1
M2	Demolition of buildings or structures.....	2
M3	Construction of buildings or structures	3
M3.1	Single dwellings and dual occupancies greater than \$50,000.	3
M3.2	Multi-unit dwellings (town houses, flats and villas)	4
M3.3	Commercial developments and change of use (shops, offices, food premises, hotels, motels, licensed clubs, education establishments, entertainment facilities and hospitals)	7
M3.4	Mixed use developments (residential / non-residential)	9
M3.5	Industrial	10

M1 General

About this part:

This part provides the requirements for the minimisation and management of waste during construction and demolition and the on-going use of sites/premises.

Applies to:

All development in the Greater Taree City Council Local Government Area.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Department of Environment and Climate Change NSW (2008). *Model Waste Not DCP Chapter 2008*.

Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings.

Australian Standard 1428 Design for Access and Mobility – 2001

Aim

This Part aims to facilitate sustainable waste management within the Greater Taree City Council Local Government Area in a manner consistent with the principles of Ecologically Sustainable Development.

Objectives

Waste Minimisation

- To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources;
- To minimise demolition waste by promoting adaptability in building design and focussing upon end of life deconstruction;
- To encourage building designs, construction and demolition techniques in general which minimise waste generation;
- To maximise reuse and recycling of household waste and industrial/commercial waste.

Waste Management

- To plan for sustainable waste management;
- To develop systems for waste management to ensure waste is transported and disposed of in a lawful manner;
- To provide guidance in regards to space, storage, amenity and management of waste management facilities;
- To ensure waste management systems are compatible with collection services;
- To minimise risks associated with waste management at all stages of development.

M2 Demolition of buildings or structures

Explanation

The demolition stage provides great scope for waste minimisation. Proponents are actively encouraged to consider possible adaptive reuse opportunities of existing buildings/structures, reuse of materials or parts thereof.

Aim

The principal aim of managing this activity is to maximise resource recovery and minimise residual waste from demolition activities.

Objectives

- o Optimise adaptive reuse opportunities of existing building/structures;
- o Maximise reuse and recycling of materials;
- o Minimise waste generation;
- o Ensure appropriate storage and collection of waste;
- o Minimise the environmental impacts associated with waste management;
- o Avoid illegal dumping;
- o Promote improved project management.

Performance criteria

1. A completed Site Waste Minimisation and Management Plan (SWMMP) shall be prepared and lodged with the demolition application (see template SWMMP in Appendix J).
As a minimum it shall include:
 - a. Adaptive reuse opportunities for buildings/structures.
 - b. All waste likely to result from the demolition, and opportunities for reuse of materials.
 - c. Facilities reuse/recycling by using the process of deconstruction, where various materials are carefully dismantled and sorted.
2. Reuse or recycle salvaged materials onsite where possible.
3. An area shall be allocated on site for the storage of materials for use, recycling and disposal (giving consideration to slope, drainage, location of waterways, stormwater outlets, vegetation, and access and handling requirements).
4. Separate collection bins or areas for the storage of residual waste shall be provided on site and clearly signposted for the purpose and content of the bins and storage areas.
5. Measures shall be implemented on site to prevent damage by the elements, odour and health risks, and windborne litter.
6. All demolition waste dockets are to be retained on site during works to confirm which facility received materials generated from the site for recycling or disposal.

M3 Construction of buildings or structures

M3.1 Single dwellings and dual occupancies greater than \$50,000.

Explanation

The design of waste and recyclables storage areas within the home and property affect ease of use, amenity and the movement and handling of waste for the life of the development.

Aim

To encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

Objectives

- o Maximise reuse and recycling of materials;
- o Minimise waste generation;
- o Ensure appropriate collection and storage of waste;
- o Minimise the environmental impacts associated with waste management;
- o Avoid illegal dumping.

Performance criteria

1. A completed Site Waste Minimisation and Management Plan (SWMMP) shall be prepared and submitted with the development application (see template SWMMP in Appendix J).
2. Plans submitted with the application must show:
 - a. The location of an onsite waste/recycling storage area for each dwelling, that is of sufficient size to accommodate Council's waste, recycling and garden waste bins. The waste storage area is to be located in the rear yard where possible and in a suitable location to avoid vandalism, nuisance and adverse visual impacts.
 - b. An identified onsite location for a compost container that does not impact on adjoining properties.
 - c. An identified kerbside collection point for the collection and emptying of Council's waste, recycling and garden waste bins.
 - d. The waste storage area is to be easily accessible and have unobstructed access to Council's usual collection point.
 - e. There should be sufficient space within the kitchen (or an alternate location) for the interim storage of waste and recyclables.
 - f. All construction waste dockets are to be retained on site during works to confirm which facility received materials generated from the site for recycling or disposal.

M3.2 Multi-unit dwellings (town houses, flats and villas)

Explanation

The design of waste and recycling storage areas within the unit and property affects ease of use, amenity, movement and handling of waste for the life of the development. Multiple households within the property increase challenges with regard to waste volumes, ease of access and operation of waste sorting and removal systems. Resources such as the *Better Practice Guide for Waste Management in Multi-Unit Dwellings* should be used to inform design of multi-unit dwellings.

Aim

To encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

Objectives

- o Ensure appropriate waste storage and collection facilities;
- o Maximise source separation and recovery of recyclables;
- o Ensure waste management systems are as intuitive for occupants as possible and are readily accessible;
- o Ensure appropriate resourcing of waste management systems, including servicing;
- o Minimise risk to health and safety associated with handling and disposal of waste and recycled material, and ensure optimum hygiene;
- o Minimise adverse environmental impacts associated with waste management;
- o Discourage illegal dumping by providing on site storage and removal services.

Performance criteria

1. A completed Site Waste Minimisation and Management Plan (SWMMP) shall be prepared and submitted with the development application (see template SWMMP in Appendix J).
2. Plans submitted with the development application must show:
 - a. The location of individual waste/recycling storage areas (such as for townhouses and villas) or a communal waste/recycling storage room(s) able to accommodate Council's waste, recycling and garden waste bins.
 - b. The location of any garbage chute(s) and interim storage facilities for recyclable materials.
 - c. The location of any service rooms (for accessing a garbage chute) on each floor of the building.
 - d. The location of any waste compaction equipment.
 - e. An identified collection point for the collection and emptying of Council's waste, recycling and garden waste bins.

- f. The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).
 - g. The on-site path of travel for collection vehicles (if collection is to occur on-site), taking into account accessibility, width, height and grade.
- 3. Systems should be designed to maximise source separation and recovery of recyclables.
- 4. Waste management systems should be designed and operated to prevent the potential risk or injury or illness associated with the collection, storage and disposal of wastes.
- 5. The following minimum collection and storage facilities shall be provided:
 - a. Residential flat buildings must include communal waste/recycling storage facilities in the form of a waste/recycling storage room (or rooms) designed in accordance with the *Better Practice Guide for Waste Management in Multi-Unit Dwellings*.
 - b. Multi-unit housing in the form of townhouses and villas must include either individual waste/recycling storage areas for each dwelling or a communal facility in the form of a waste/recycling storage room (or rooms) designed in accordance with the *Better Practice Guide for Waste Management in Multi-Unit Dwellings*.
 - c. The waste/recycling storage areas or rooms must be of a size that can comfortably accommodate separate garbage, recycling and garden waste containers at the rate of Council provision.
 - d. For multi-storey developments that include ten or more dwellings, a dedicated room or caged area must be provided for the temporary storage of discarded bulky items which are awaiting removal. The storage area must be readily accessible to all residents and must be located close to the main waste storage room or area.
- 6. The following location and design criteria shall apply to collection and storage facilities:
 - a. In townhouse and villa developments with individual waste/recycling storage areas, such areas should be located and designed in a manner which reduces adverse impacts upon neighbouring properties and upon the appearance of the premises.
 - b. There must be an unobstructed and continuous accessible path of travel (*as per Australian Standard 1428 Design for Access and Mobility – 2001*) from the waste/recycling storage area(s) or room(s) to:
 - The entry to any Adaptable Housing (*as per Australian Standard 4299 Adaptable Housing – 1995*),
 - The principal entrance to each residential flat building,
 - The point at which bins are collected/emptied.

In instances where a proposal does not comply with these requirements, Council will consider alternative proposals that seek to achieve a reasonable level of access to waste/recycling storage area(s) or room(s).

- c. Communal waste storage areas should have adequate space to accommodate and manoeuvre Council's required number of waste and recycling containers.
- d. Each service room and storage area must be located for convenient access by users and must be well ventilated and well lit.
- e. Where bins cannot be collected from a kerbside location or from a temporary holding area located immediately inside the property boundary, the development must be designed to allow for on-site access by garbage collection vehicle. In these instances, the site must be configured so as to allow collection vehicles to enter and exit the site in a forward direction and so that collection vehicles do not impede general access to, from or within the site. Access driveways to be used by collection vehicles must be of sufficient strength to support such vehicles.
- f. Should a collection vehicle be required to enter a property, access driveways and internal roads must be designed in accordance with *Australian Standard 2890.2 Parking Facilities – Off-Street Commercial Vehicle Facilities – 2002*.
- g. Residents should have access to a cold water supply for the cleaning of bins and the waste storage areas. Storage areas should be constructed and designed to be weather proof and easy to clean, with wastewater discharged to sewer.
- h. The design and location of waste storage areas/facilities should be such that they compliment the design of both the development and the surrounding streetscape.
- i. Developments containing four or more storeys should be provided with a suitable system for the transportation of waste and recyclables from each storey to waste storage/collection areas.
- j. Garbage chutes must be designed in accordance with, the *Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings*. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use. Alternative interim disposal facilities for recyclables should be provided at each point of access to the garbage chute system.
- k. All construction waste dockets are to be retained on site during works to confirm which facility received materials generated from the site for recycling or disposal.

M3.3 Commercial developments and change of use (shops, offices, food premises, hotels, motels, licensed clubs, education establishments, entertainment facilities and hospitals)

Explanation

A range of non-residential uses present an array of unique waste minimisation opportunities and management requirements. Flexibility in size and layout is often required to cater for the different needs of multiple tenants as well as future changes in use.

Aim

To ensure new developments and changes to existing developments are designed to maximise resource recovery (through waste avoidance, source separation and recycling); and to ensure appropriate well-designed storage and collection facilities are accessible to occupants and service providers.

Objectives

- o Ensure appropriate waste storage and collection facilities;
- o Maximise source separation and recovery of recyclables;
- o Ensure waste management systems are as intuitive for occupants as possible and readily accessible to occupants and service providers;
- o Ensure appropriate resourcing of waste management systems, including servicing;
- o Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene;
- o Minimise adverse environmental impacts associated with waste management;
- o Discourage illegal dumping by providing on site storage and removal services.

Performance criteria

1. A Site Waste Minimisation and Management Plan (SWMMP) shall be prepared and submitted with the development application (see template SWMMP in Appendix J).
2. Plans submitted with the development application must show:
 - a. The location of the designated waste and recycling storage room(s) or areas, sized to meet the waste and recycling needs of all tenants.
 - b. The location of temporary waste and recycling storage areas within each tenancy. These are to be of sufficient size to store a minimum of one day's worth of waste.
 - c. An identified collection point for the collection and emptying of waste, recycling and garden waste bins.
 - d. The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).

- e. The on-site path of travel for collection vehicles (if collection is to occur on-site).
 - f. Convenient access from each tenancy to the waste/recycling storage rooms or areas. There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage rooms or areas.
3. Every development must include a designated waste/recycling storage area or room(s). Depending upon the size and type of the development, it may be necessary to include a separate waste/recycling storage room/area for each tenancy.
 4. Arrangements must be in all parts of the development for the separation of recyclable materials from general waste and for the movement of recyclable materials and general waste to the main waste/recycling storage room/area. For multiple storey buildings, this might involve the use of a goods lift.
 5. The waste/recycling storage room/area must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated between collections.
 6. The waste/recycling storage room/area must provide separate containers for the separation of recyclable materials from general waste. Standard and consistent signage on how to use the waste management facilities should be clearly displayed.
 7. Waste management facilities must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.
 8. The size and layout of the waste/recycling storage room/area must be capable of accommodating reasonable future changes in use of the development.
 9. A waste/recycling cupboard must be provided for each and every kitchen area in a development, including kitchen areas in hotel rooms, motel rooms and staff food preparation areas. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day's waste and to hold separate containers for general waste and recyclable materials.
 10. Any garbage chutes must be designed in accordance with the *Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings*. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use.
 11. All construction waste dockets are to be retained on site during works to confirm which facility received materials generated from the site for recycling or disposal.

M3.4 Mixed use developments (residential / non-residential)

Explanation

Where residential and commercial land uses occur within the one building or development waste management will necessitate a balancing of variable demands, including preservation of residential amenity.

Aim

To ensure new developments and changes to existing development are designed to maximise resource recovery (through waste avoidance, source separation and recycling) and to ensure appropriate, well-designed storage and collection facilities are accessible to occupants and service providers.

Objectives

- o Ensure appropriate waste storage and collection facilities are provided;
- o Maximise source separation and recovery of recyclables;
- o Ensure waste management facilities are safely and easily accessible to occupants and service providers;
- o Ensure appropriate resourcing of waste management systems, including servicing;
- o Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene;
- o Minimise adverse environmental impacts associated with waste management;
- o Discourage illegal dumping by providing on site storage and removal services.

Performance criteria

1. A completed Site Waste Minimisation and Management Plan (SWMMP) shall be prepared and submitted with the development application (see template SWMMP in Appendix J).
2. The controls at Part M3.2 Multi-Unit Dwellings apply to the residential component of mixed-use development.
3. The controls at Part M3.3 Commercial Developments apply to the non-residential component of mixed-use development.
4. Mixed Use development shall incorporate separate waste/recycling storage rooms/areas for the residential and non-residential components.
5. The residential waste management system and the non-residential waste management system must be designed so that they can efficiently operate without conflict.

M3.5 Industrial

Explanation

Industrial developments typically produce a diverse range of waste products. Some of these waste products may be hazardous and require compliance with established laws/protocols that are additional to this Chapter. Other waste products are similar in nature to commercial and domestic waste streams. Mixing waste products limits potential reuse and recycling opportunities and may distribute toxic material through a larger volume of wastes.

Objectives

- Ensure appropriate waste storage and collection facilities;
- Maximise source separation and recovery of recyclables;
- Ensure waste management facilities are as intuitive for occupants as possible and readily accessible to occupants and service providers;
- Ensure appropriate resourcing of waste management systems, including servicing;
- Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene;
- Minimise adverse environmental impacts associated with waste management;
- Discourage illegal dumping by providing on site storage and removal services.

Performance criteria

1. A completed Site Waste Minimisation and Management Plan (SWMMP) shall be prepared prior to submitting the application (see template SWMMP in Appendix J).
2. Plans submitted with the development application must show:
 - The location of designated waste and recycling storage room(s) or areas sized to meet the waste and recycling needs of all tenants.
 - The on-site path of travel for collection vehicles.
 - Convenient access from each tenancy and/or larger waste producing area of the development to the waste/recycling storage room(s) or area(s). There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage room(s) or area(s).
 - A designated general waste/recycling storage area or room(s) as well as designated storage areas for industrial waste streams (designed in accordance with specific waste laws/protocols).
 - Waste/recycling storage room/areas able to accommodate bins that are of sufficient volume to contain the quantity of waste generated between collections.
3. Waste management storage rooms/areas must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.

4. A waste/recycling cupboard must be provided for each and every kitchen area in the development. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day's waste and to hold separate containers for general waste and recyclable materials.
5. All construction waste dockets are to be retained on site during works to confirm which facility received materials generated from the site for recycling or disposal.

Part N

Landscaping Requirements



Greater Taree
CITY COUNCIL

PART N LANDSCAPING REQUIREMENTS

Contents

N1	Landscaping requirements.....	3
N1	General landscaping requirements.....	4
N1.1	Site coverage and lot requirements.....	4
N1.2	Landscape plans	8
N1.3	Public Open Space	11
N1.4	Dual occupancy, multi-dwelling housing, residential flat buildings and mixed use development	12
N1.5	Car Parks.....	14

N1 Landscaping requirements

About this part:

This part provides the detailed guidelines for landscaping.

Applies to:

All new development including subdivision, commercial, industrial, residential (with the exception of single dwelling houses), tourist facilities and car parking areas, as well as the redevelopment of existing sites, including heritage items and sites located within a Heritage Conservation Area.

Related Policy / Technical Manual:

Indigenous Plants of Greater Taree, GTCC Open Space Strategy.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Objectives

- Maintain or improve the overall image and character of the area by ensuring that new development does not intrude on its surroundings and that an aesthetically pleasing environment is created for all;
- Maintain and improve the visual amenity of townships consistent with the identified landscape character of an area;
- Provide safe environments for users by avoiding or minimising the risks in landscaped areas, and providing landscaping which assists in crime prevention.

N1 General landscaping requirements

N1.1 Site coverage and lot requirements

Explanation

There are three major types of environment relevant to landscaping within the Greater Taree Local Government Area – coastal, river and hinterland. The characteristics of each are as follows:

Coastal

Subject to salt laden winds. Often few or only light frosts.

Soils: Generally sandy, poor, lacking in nutrient, with low water loading capacity, free draining, and prone to erosion – particularly from wind. Clay soils sometimes present.

Comments: Careful plant selection to suit sandy soils and salt exposure. Mulching beds are desirable to reduce moisture loss.

River

Subject to periodic inundation and possible overland flows, weed infestation common.

Soils: Fertile, often permanently moist, areas subject to tidal influence may also be brackish.

Comments: Careful plant selection required to suit periodic water logging.

Hinterland

Subject to frosts in low-lying areas.

Soils: Shallow, generally clay, fairly fertile.

Comments: Cold hardy plants may be required for frosty locations.

Objectives

- Provide for pleasant, liveable environments and microclimates in the landscaped surroundings of developments and maximise the energy efficiency of buildings;
- Facilitate a sustainable landscape that can be maintained efficiently and which promotes the conservation of natural resources, such as the incorporation of water sensitive urban design features and the use of indigenous plant species
- Ensure landscape works are designed and carried out to minimise potential environmental impacts and to reduce negative effects on adjoining land
- Incorporate within new landscaping existing vegetation of ecological, aesthetic or cultural heritage significance and natural landscape elements such as existing slope, rock formations and watercourses.

Appendix 5 of the Planning for Bushfire Protection Guidelines contains additional landscaping requirements for bushfire prone land and should be read in conjunction with this part.

This Part should be read in conjunction with **Part B Character Statements and Part L Local Area Plans of this DCP** which may contain specific landscaping requirements for certain areas.

Performance criteria

1. Designs should reflect the unique local character of the area in which they are located.
2. An assessment of the physical conditions of each site should be undertaken prior to design. Particular emphasis should be placed on the recognition of aspect, prevailing wind directions, soils, drainage and susceptibility of the site to flooding.
3. In established areas, landscaping should relate to the scale of other elements of the streetscape and the landscaping of adjoining development. Where possible, landscaped areas should adjoin the landscaped areas of adjacent allotments.
4. Proposals should endeavour to maintain established gardens, remnant vegetation and natural features where practicable. In particular, proposals should identify existing areas of natural vegetation and provide for the retention, protection and enhancement of these areas within the site where possible.
5. Existing trees should be retained wherever possible and shall be protected during construction with temporary fencing (i.e. capped star pickets at 2m centres with hazard mesh) around their drip lines – outer edge of canopy. Existing areas of natural vegetation shall also be fenced and protected from soil disturbances, and should not be used for the storage of materials.
6. Sites should be considered within the context of their importance and contribution to landscape connectivity and wildlife movement. Proposals should minimise the impact on native flora and fauna and their habitats, particularly threatened species and plant communities and ecological processes. Inclusion of measures to help offset any impacts (such as nesting boxes, bat boxes, bird feeders, etc) should also be considered in the design.
7. To maintain the ecological balance of the local area, indigenous plants (species natural to the local area) should be used in preference to native plants or exotic plants. Noxious weeds, pest plants and undesirable species should also be avoided.
8. Species to be used should be well established, disease free, container or field grown stock that have been propagated for the specific site conditions, i.e. sun-hardened, shade and sun tolerant.
9. Designs should contribute to the creation of pleasant microclimates by providing for summer shade and winter sun and capturing breezes. This can be achieved by incorporating the following:
 - a. Providing one shade tree per 20m² of lawn area.
 - b. Maximising winter solar access by planting winter-deciduous trees such as Illawarra Flame Tree (*Brachychiton acerifolius*) adjacent north-facing living areas.
 - c. Respecting the solar access of adjacent properties by minimising overshadowing.
 - d. Using landscaping to minimise heat and glare from built structures and hard surfaces.
 - e. Incorporating earth berms or masonry fences in noisy locations to help reduce noise and maintain privacy.

Information on noxious weeds, pest plants and undesirable species can be found in Council's **Indigenous Plants of Greater Taree** publication.

10. Utility services (sewerage, water, gas and power lines) should be considered early in the design phase to avoid disturbance to vegetation during future maintenance works. Tunnelling (directional boring) for underground services, rather than open trenching, should be undertaken in areas adjacent to existing trees to reduce injury to tree roots. Potential future impacts on the structural integrity of buildings (including footings) should be considered as well as the use of appropriate mitigation measures such as root pruning and root barriers.
11. For the provision of safe environments plantings should avoid obscuring casual observation of sites and creating areas of dense vegetation, in order to maintain public surveillance and reduce the incidence of crime. Shrub plantings under 1m in height should be used to enable passive surveillance where this is desired. Surfaces should be non-slip, and trip hazards must be avoided. Potential injurious plants should not be used adjacent to pedestrian areas (e.g. sharply pointed or serrated leaves or plants which shed seed/fruit or are prone to dropping limbs). Poisonous plants and plants known to cause respiratory problems should not be used in designs for childcare centres and aged care facilities. Vehicular and pedestrian traffic should be separated.
12. Components of landscapes should be in accordance with Australian Standards where they apply, such as:
 - a. Areas subject to wetting per AS1141.2
 - b. Pedestrian lighting per AS 1158.3
 - c. Roadway sight line maintenance per AS 2890.1 (1993)
 - d. Potting mixes per AS 3743 (1996)
 - e. Outdoor lighting per AS 4282 (1997)
 - f. Pruning amenity trees per AS 4373 (1996)
 - g. Top dressing, landscape soils per AS 4419 (1998)
 - h. Composts, mulches and soils per AS 4454 (1997).
13. Implementation of Ecologically Sustainable Development (ESD) principles, including the selection of low-embodied energy materials, recycled materials (e.g. chipping any removed vegetation and using the chips on site as mulch, re-use of on-site topsoil, and use of recycled plastic products), and design to ensure low resource consumption (e.g. drought hardy plantings to reduce water use, use of permeable paving and providing on-site detention/infiltration areas to allow rainfall to seep into the soil rather than run off). Water features should be avoided, and sprinklers should be used only in the evening, overnight, or early morning to minimise evaporation losses.
14. Protection of visual amenity: unsightly activities and structures should be screened, and buildings should be framed and softened. The visual impact of car parks and roadways should be reduced by erecting fences and planting mounds and vegetative screens. Good views into and from the site should be used advantageously by siting viewing areas within visual corridors. Entry points should be clearly defined and can be enhanced by special feature / accent plantings to delineate them (e.g. strong plant forms, striking foliage colours, etc).
15. Protection of water quality through the retention of natural vegetation along watercourses, and implementation of short-term erosion control measures (e.g. silt fences) during construction.

16. All landscape designs should take into account ongoing maintenance requirements. Design, plant selection and construction techniques should facilitate efficient and low cost maintenance of the newly established and mature landscapes. Edgings to lawns are recommended to define turf areas and to minimise the invasion of turf grasses into garden beds. Use of low maintenance options should be considered as replacement for turf (e.g. mulched garden beds, groundcovers, gravel or hard paving). Turf areas should be free of surface rocks/debris to avoid harm to public safety during mowing. Any plantings (e.g. trees) in lawn areas must be planted into mulched island beds and not planted directly into the turf. This will reduce the risk of mowing damage and improve plant establishment by avoiding root competition from the turf. High use areas should be gravel or unit pavers rather than turf.
17. The choice of hard landscaping materials should be made carefully. Large areas of paving can be enhanced by combining different paving materials (e.g. concrete/bitumen with brick grids or other paving patterns). Smaller areas of paving should be paved with a small-scale unit, which relates to the size of the area to be paved, e.g. brick cobble. Trees in paved areas should be surrounded with root barriers to encourage deep rooting and avoid shallow surface roots, which have the potential to disturb paving units.
18. Hard landscaping should allow the infiltration of water into the soil, through for example permeable paving.
19. Designs should have a sense of unity and a balance of repetition and contrast to avoid monotonous or chaotic forms of landscaping.

N1.2 Landscape plans

Explanation

Landscaping assists the process of integrating development into the surrounding neighbourhood. The selection of plants and materials, which complement the existing streetscape and reflect a similar size and scale helps blend new development into the surrounding environment.

Similarly, the landscaped areas of a site, when designed as part of the total site design, can provide an attractive and useable link between the site, dwelling and its surrounds.

Landscaping should be designed to complement the natural features of the site and adjoining areas. Existing landscape elements such as existing slope, rock formations, mature trees, other vegetation or watercourses should be preserved.

In established areas, landscaping should relate to the scale of other elements of the streetscape and the landscaping of adjoining development. Landscaped areas should adjoin the landscaped areas of adjacent allotments where possible.

The landscaped area may assist in moderating the sun and shade impacts on a dwelling and soft landscaping areas enhance natural infiltration of water into the soil.

Landscape areas may consist of soft landscaped areas, such as gardens, trees and grass and hard landscaped areas such as swimming pools and paved outdoor areas. It is important to achieve a balance between hard and soft landscaping.

Objectives

- Ensure that landscaping is considered as an integrated part of the design process;
- Maximise soft landscaping to soften the appearance of buildings, complement the streetscape, maximize water infiltration and reduce water runoff;
- Retain and enhance significant trees and existing vegetation that may contribute to a local area landscaping quality;
- Maintain the ecological balance of the local area, using indigenous plants planting known to suit local conditions;
- Maintain the visual amenity of existing streetscapes and enhance the appearance and amenity of development;
- Maintain existing levels of density of trees;
- Provide shading from the northern, western and eastern sun in summer, while allowing appropriate levels of solar access in winter;
- Contribute to the provision of visual and acoustic privacy where possible and appropriate.

Performance criteria

1. A Landscape Plan shall be submitted to Council in conjunction with the Development Application, or where otherwise required by Council.
2. Landscape Plans shall be prepared by a suitably qualified and experienced person (this is normally a Landscape Architect or a Landscape Designer with project experience similar to the project being proposed). Generally there should be three plans submitted to Council.

Site Analysis Plan outlining:

1. Views into and out of the site, identifying which views are to be blocked and which are to be retained;
2. Solar access and any potential solar impacts on sites to the south;
3. Areas of natural vegetation on the site, including trees and understorey vegetation;
4. Slopes on the site and areas of steep land unsuitable for development;
5. Recent aerial photograph.

Site Layout Plan showing:

1. Existing and proposed buildings and structures including fences;
2. Existing and proposed overhead and underground services (power/water/gas);
3. Existing trees and areas of natural vegetation proposed to be retained and removed on site and off-site within 10m of the property boundary (along with a schedule of botanical names and condition);
4. Proposed earthworks (cut and fill areas) and retaining walls together with details of existing ground levels and proposed finished levels of the site, including mounding;
5. Existing and proposed surface and subsurface drainage, including any drainage infrastructure (e.g. Ag drains and surface pits) planned to be installed;
6. Measures to be used to control soil erosion during construction;
7. Temporary protective structures (e.g. board crossings over existing pavements, or temporary fencing) to be used.

Landscape Plan including:

1. A Statement of Landscape Intent, which gives an explanation (in words) of what the designer is trying to achieve in the landscape plan;
2. Explanation if non-compliant – if the plan intentionally does not meet Council requirements then an explanation of how it does not, and justification for why such variation should be approved, needs to be provided;
3. Planting Schedule with the following information:
 - a. Plants should be sorted into groups of like sizes (i.e. trees, shrubs, groundcovers, climbers),
 - b. Plant names – Botanical nomenclature (genus, species and types – subspecies, varieties, forms or named cultivars) and common names,
 - c. Plant numbers (quantity per species),
 - d. Mature height and canopy width,
 - e. Planting details (staking, mulching, soil depth, fertiliser, ground preparation),
 - f. Size at time of planting (pot size for most plants, or minimum trunk calliper and minimum height for non-containerised trees) Normally Council will expect the minimum pot sizes to be met:
 - trees 45L (400mm),
 - shrubs 4L (200mm),
 - groundcovers 1.5L (140mm),
 - native grasses - forestry tubes or virocells.
4. Pavement and ground treatments: types and colours of pavements should be specified, along with edge treatments. Turf or permeable paving is preferred to allow for the infiltration of rainfall and to reduce stormwater runoff. High usage areas should be paved or gravelled rather than turfed;
5. Root barriers should be clearly identified where they are to be used;
6. Proposed maintenance program for the first twelve (12) months, with a monthly program of proposed activities including plant replacement, fertilizing, re-mulching, pruning, etc;
7. All of these plans should be at the same scale and orientation on the page, and include the following:
 - a. Title block with project name, plan version and date,
 - b. North point in the upper right hand corner of the page,
 - c. Scale (1:100 or 1:200 preferred),
 - d. Site Boundaries (using a specific line type easily identified using the key).
8. Main structures on site (buildings, carports, fences, retaining walls, surfacing materials) and off-site within 10m of the property boundary. The floor plans of structures must be provided to show the locations of doors and windows.

N1.3 Public Open Space

Explanation

The provision of landscaping in parks and open space areas, particularly trees, greatly enhances the aesthetic appearance and useability of the open space where landscaping is appropriately designed and located.

Objectives

- Ensure that landscaping is considered as an integrated part of the design process;
- Retain and enhance significant trees and existing vegetation that may contribute to a local area landscape quality;
- Maintain the ecological balance of the local area, using indigenous plants planting known to suit local conditions;
- Maintain the visual amenity of existing streetscapes and enhance the appearance and amenity of development;
- Maintain existing levels of density of trees;
- Ensure the safety of open space users.

Performance criteria

1. Parks should be designed with the end use(s) being the prime consideration.
2. If parks are to incorporate playing fields, courts, etc, these facilities should be orientated to the correct aspect. Children's play equipment should be located to provide maximum visibility for security reasons and incorporate barriers near busy roads.
3. Ensure the safety of open space users through appropriate species, location and consideration of the principles of Crime Prevention Through Design (CPTD).
4. Drainage channels should also be provided where required.
5. The emphasis in planting should be trees in lawn areas, thus providing a minimum of ongoing maintenance. A minimum of 3m between plantings should be provided to allow mower access. Where mass planted areas are used, these should be edged and mulched.
6. The use of deciduous trees for sun/shade control should be incorporated, particularly in seating areas and children's playground areas to make them desirable in both summer and winter.
7. Where usage of the park is expected to be high, pathways should be provided anticipating the major pedestrian desire lines. Depending on the intensity of usage, lighting, seating and litterbins should be provided in adequate numbers. Where possible, seats and litter bins should be coordinated in a style and colour to provide a sense of unity within the park.
8. The developer will need to maintain all landscaped areas for a certain period to be negotiated with Council prior to being handed over to Council.

N1.4 Dual occupancy, multi-dwelling housing, residential flat buildings and mixed use development

Explanation

The quality and suitability of communal open space / landscaped areas of multi-unit housing, if well designed, contributes to the recreational and service space of residents and minimises vandalism and alienation from either private or communal use.

Objectives

- Ensure well designed and useable communal areas;
- To integrate landscaping into the design of multi-unit residential development to soften the visual impact of the development;
- To retain existing vegetation where possible;
- Provide safe environments for users by avoiding or minimising the risks in landscaped areas, and providing landscaping which assists in crime prevention.

Performance criteria

1. Landscaping should be used to create a pleasant living environment and include private open space; children's play areas and communal gardens.
2. Planting selection should:
 - a. require minimal maintenance,
 - b. provide privacy for private open space areas,
 - c. screen service areas – garbage bin stores, drying yards, visitor parking, maintenance areas, etc,
 - d. reduce glare and reflected heat from buildings and hard services,
 - e. provide shade in summer and sun in winter,
 - f. direct visitors to entry points and
 - g. not create excess shade on clothes drying areas.
3. Large areas in driveways can be reduced in scale through the use of unit paving. Physical barriers such as kerbs are required where driveways and car parks adjoin landscaped areas to protect them from damage.
4. Clearly defined play areas, at a point easily accessible and visible to all residents (for supervision) should be provided. Summer shade and winter sun should be provided through the use of deciduous trees so play areas can be used all year round.
5. Fencing should be used to provide privacy and separate private open space from common open space. Materials to be used should be compatible with those used elsewhere in the development and should have minimal ongoing maintenance.

Applicants are advised to also refer to the requirements of **Part H – Residential Development** of this DCP.

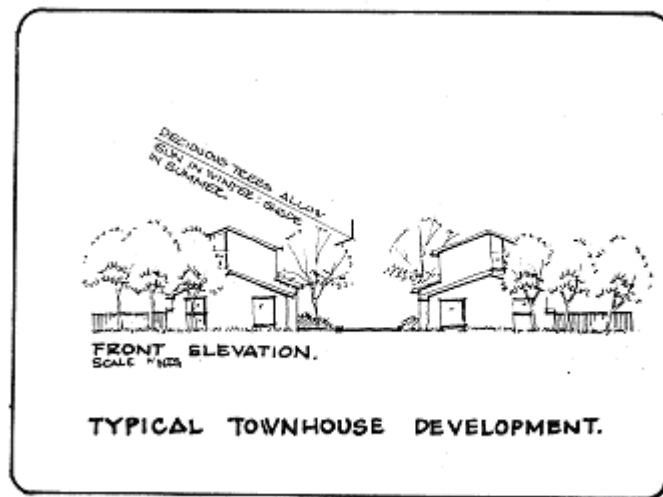


Figure 3 Typical elevation townhouse development landscaping treatment

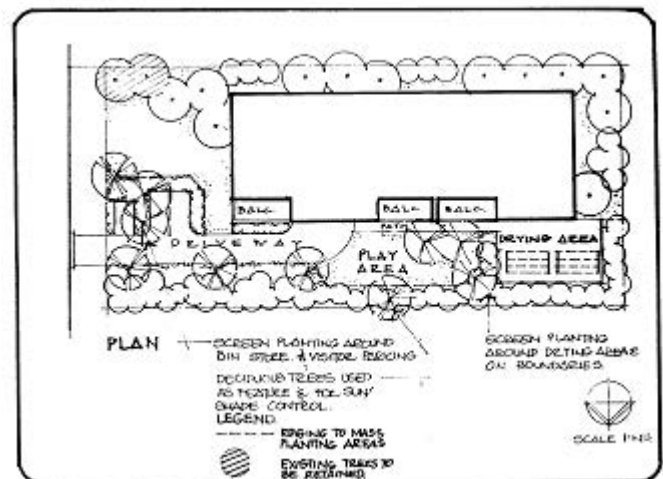


Figure 4 Typical plan townhouse development landscaping treatment

N1.5 Car Parks

Landscaping to car parking areas improves the aesthetic appearance and provides shade to both vehicles and pedestrians.

Applicants are advised to also refer to the requirements of **Part G – Car Parking and Access** of this DCP.

Objectives

- Provide safe environments for users by avoiding or minimising the risks in landscaped areas, and providing landscaping which assists in crime prevention;
- Ensure suitable species are used and landscaping is appropriately located.

Performance criteria

1. Landscaping of car parks should aim to reduce the visual impact of expanses of hard paving, reduce glare and heat and provide shade for vehicles and pedestrians.
2. Provision should be made for islands of planting at the end of rows and interspersed between car parking bays. These areas of planting should be protected from vehicular overrun by using kerbs, wheel stops and bollards, and be of at least 1.8m in width to function effectively as planting beds.
3. Contrasting paving, such as unit paving, should be used to define and visually separate pedestrian and vehicular access.
4. Where car parks adjoin residential areas acoustic and visual privacy should be maintained through fencing, mounding or vegetative screening.

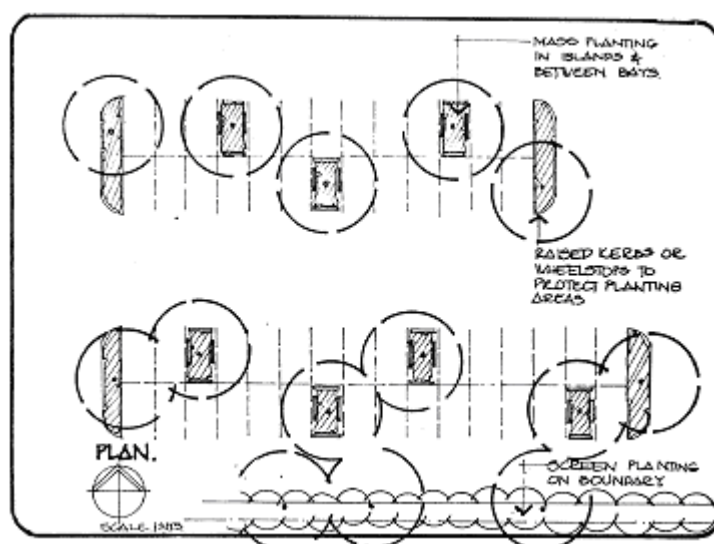


Figure 5 Typical commercial development landscaping treatment

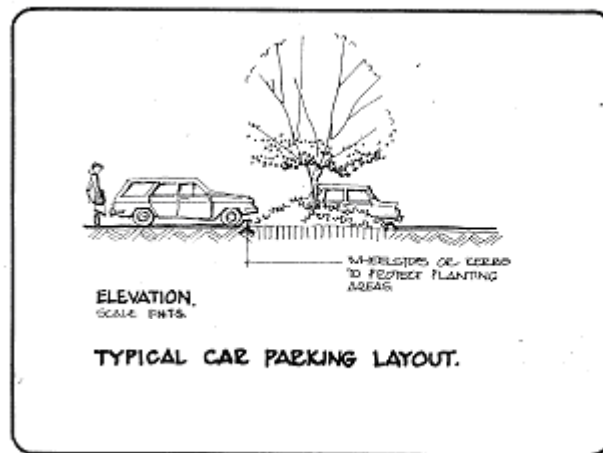


Figure 6 Typical car parking layout.

Part O

Signage and Advertising Requirements



Greater Taree
CITY COUNCIL

**PART O SIGNAGE AND
ADVERTISING
REQUIREMENTS**

Contents

01. Introduction 3

 01.1 Specific location requirements4

 01.1.1 Business zones.....4

 01.1.2 Industrial zones.....5

 01.1.3 Isolated businesses.....6

 01.1.4 Heritage items and heritage conservation areas7

 01.1.5 Prohibited signage8

01. Introduction

About this part:

This part provides the detailed guidelines for off road advertising and signage.

Applies to:

All development in the Greater Taree Local Government Area where advertising and signage is permitted.

Date adopted by Council:

14 October 2009

Effective Date:

25 June 2010

Related Policy / Technical Manual:

Nil.

SEPP 64 - Advertising and Signage should be read in conjunction with this section.

Principle objectives

- To establish a consistent approach to the erection of signage;
- Ensure signage and advertising is in keeping with the scale and character of the building or locality and does not detract from the architecture or streetscape;
- Ensure protection of the urban and rural streetscapes through managing advertising and signage.

Some signage is permissible as **Exempt or Complying Development**. Applicants should refer to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and also refer to the Greater Taree Local Environmental Plan 2010 for the Exempt and Complying requirements.

01.1 Specific location requirements

01.1.1 Business zones

Explanation

The shopping centres in the Greater Taree City Council area are more than a collection of shops and offices. They provide the community focus, or heart of the town. The way a shopping centre presents itself determines the environmental quality enjoyed by the employees and customers of the centre. This quality is influenced by a number of factors, including: signage, traffic management, carparking, streetscape elements (footpaths, street furniture, landscaping) public open space, architecture and urban design.

All of the above factors are directly controlled or influenced by Council. Most are part of the public asset but some are determined more by private landowners through the design of their development. Of these private influences, architecture and advertising signs are prominent factors which contribute more than any other to environmental quality. Ideally these two factors would be designed together with all signage being an integral part of the architectural design of the building. However, Council acknowledges the evolving use of buildings and the need for innovation in signage beyond that which may have been originally envisaged when the building was constructed.

Objectives

- Promote innovation and quality in the provision of business advertising signs within Business Zones shopping centres;
- Encourage consideration of signage as part of the original design process for any new development;
- Enable advertisers to display messages or images that complement and conform to both the development on which it is displayed and the character of the surrounding locality;
- Ensure that Business Zones as a whole are not adversely affected by signage in terms of appearance, size, illumination, overshadowing and the like or by visual clutter through the proliferation of signs.

Performance Criteria

1. Developments that incorporate signage as part of the original architectural design of the building will not be required to submit separate development applications or pay fees for advertising signs.
2. Council will support advertising sign proposals which promote innovation and originality in their design, style or character.
3. The use of corporate identification and colours should not take precedence over Council's streetscape objectives. Corporate identification should be carefully selected and amended where necessary to retain the character of individual buildings and the surrounding locality.

4. Council recognises that it is the shopping centre operating as a whole which attracts increased levels of customers. Individual businesses should aim to attract pedestrians by the use of below-awning level signs. Above-awning signs are orientated to the longer distance perspective of pedestrians and traffic. As such the role of above-awning signs is secondary to the role of below-awning signs and their use should be limited.
5. The skyline and distant images of shopping centres should be set by the architectural features of buildings rather than by roof signs, sky signs or large panel signs.

01.1.2 Industrial zones

Explanation

The industrial estates within the Council area facilitate a vast range of land uses. This range of land uses require flexibility in controls relating to signage, together with an acceptance that most industrial business is undertaken by motor vehicle and this requires middle distance viewsheds for signs.

Objectives

- o To promote quality in the provision of business advertising signs within industrial areas;
- o To encourage consideration of signage as part of the original design process for any new development;
- o To enable advertisers to display messages or images that complement and conform to both the development on which it is displayed and the character of the surrounding locality;
- o To ensure that industrial areas are not adversely affected by signage in terms of appearance, size, illumination, overshadowing and the like or by visual clutter through the proliferation of signs.

Performance criteria

1. Council will support advertising sign proposals which promote innovation and originality in their design, style or character. Council acknowledges that signage must be orientated to the longer distance perspective of traffic, rather than pedestrian dominated areas.
2. Signage which is purpose-designed for a building should reflect the bulk and scale of the building and be focussed at the primary approach route for the development.
3. Signage must relate to the uses or activities carried out on the same land on which the advertising sign is to be erected.
4. Signage shall not project over the roadway or footpath.
5. Ensure that signage does not dominate the architecture or cover a large portion of the building.
6. Signage is to be integrated into the design of the building.

7. One advertising sign with a maximum of 5m² may be permitted on the building for each street frontage. This sign may be no higher than the wall on which it is mounted.
8. One logo of a scale appropriate to the building façade may be permitted in addition to five (5).
9. One (1) freestanding advertising structure shall be permitted for each street frontage, with a maximum area of 3m².
10. A maximum of two (2) pole or pylon signs per street frontage shall be permitted where:
 - a. They have a maximum of 6m² advertising space,
 - b. They have a maximum overall height of 7m,
 - c. The bottom of the pole or pylon is at least 3m above ground level.
11. Multi-unit industrial estates are to provide gateway directional signage for the units, industries and their layout at the entry to the estate. A maximum of one (1) such sign shall be permitted to a maximum of 8m² at the intersection of the entry road and the major through road past the industrial complex. The sign will allow for the general name of the industrial complex, the name of each business, and if appropriate a directional map.
12. All advertising must relate to the uses or activities carried out on the same land on which the advertising sign is to be erected.
13. Signs shall not project over road or footpath.
14. The above provisions apply to signage on the building or site of the business. Advertising signage on other land will not be permitted.

01.1.3 Isolated businesses

Explanation

There are a number of businesses (such as corner stores, existing uses, roadside stalls, nurseries and rural industries) outside traditional shopping centres and industrial estates as well as many home industries.

For businesses in residential areas, such as home industries, some special controls must be imposed to maintain the residential amenity of the neighbourhood.

Objectives

- To promote quality in the provision of business advertising signs;
- To encourage consideration of signage as part of the original design process for any new development;
- To enable advertisers messages or images to be conveyed while completing the character of the surrounding locality.

Performance criteria

1. Council will support advertising sign proposals which promote innovation and originality in their design, style or character.
2. The use of corporate identification and colours should not take precedence over Council's streetscape objectives. Corporate identification should be carefully selected and amended where necessary to retain the character of individual buildings and the surrounding locality.
3. Signage which is purpose-designed for a building should reflect the bulk and scale of the building and be focussed at the primary approach route for the development.
4. All advertising must relate to the uses or activities carried out on the same land or which the advertising sign is to be erected.
5. Illuminated signage will not be permitted.

01.1.4 Heritage items and heritage conservation areas

Explanation

Heritage items and Heritage Conservation areas are subject to special provisions under Council's Local Environmental Plan 2010 and Development Control Plan 2010.

To reflect the planning provisions for heritage areas it is particularly important that new signage on new or old buildings reflects the significance of the site or locality.

Objectives

- o To respect the heritage significance and values of the site or locality;
- o To enable advertisers messages or images to be conveyed while complementing the architectural features of the building and the character of the surrounding locality.

Performance Criteria

1. Colours should conform, where possible, with those originally used on signs on the building.
2. If new development is involved and/or original colours cannot be identified, colours typical of the relevant period should be used. Original colours were generally subdued stone and earth tones which were oxide based. Typical colour tones included russets, terracottas, ochres, siennas, creams, chrome, green and rich browns. Trims and lettering often utilised high contrast or a stronger shade of the same colour with reddish browns and green-greys predominating.
3. Where illuminated, external illumination such as spot lighting is preferred, provided the intensity of illumination is not obstructive in the surrounding area.
4. Lettering should conform, where practicable, with the style used in the relevant period. The most common types were Egyptian (antique), Ionic (Fat Clarendon) and Grotesque (Sans Serif).

01.1.5 Prohibited signage

The following signage is prohibited:

1. Any new billboard sign other than replacement of an existing billboard with demonstrated existing use rights and other than billboard signs placed on the reverse side of a promotional sign.
2. Any change in graphics on signs which have an adverse economic effect on the Greater Taree area (e.g. by encouraging vehicles to pass through the local area to use facilities in other areas).
3. Any sign advertising illegal products.
4. Any sign on a vehicle (whether registered or not) which is used principally as an advertisement rather than as a vehicle.
5. Any sign or bill poster placed within the road reserve (including but not limited to those attached to power or telecommunications poles, existing signage poles or freestanding poles etc.)
Note: This includes election signs.



FIGTREES ON THE MANNING
TAREE, NEW SOUTH WALES
LOCAL AREA PLAN / MASTER PLAN

01.	VISION STATEMENT	01	06.2	Diagrams	32
02.	EXECUTIVE SUMMARY	03	06.2.1	Images	32
03.	DESIGN PRINCIPLES	05	06.2.2	Plaza + Paving	32
03.1	Planning + Design of the Masterplan	06	06.2.3	Landscape	33
03.2	Place Capital + Gap Analysis	07	06.2.4	Boardwalk	33
04.	DEVELOPMENT CONTEXT	09	06.2.5	Existing Trees + Vegetation	34
04.1	Context Analysis	10	06.2.6	Proposed Trees + Vegetation	34
04.1.1	Mid North Coast Regional Strategy	10	06.2.7	Road Network	35
04.1.2	Local Area Strategy	10	06.2.8	Basement + On Road Car Parking	35
04.1.3	Taree Urban Analysis	11	07.	CHARACTER PRECINCTS	36
04.1.4	Site Analysis	12	07.1	Five Precincts	37
04.1.5	Context Height + Scale	13	07.2	Gateway Residential Precinct	38
04.2	Site Analysis	14	07.4	Figtree Commercial Precinct	44
04.2.1	Location	14	07.5	The Dairy Heritage Precinct	50
04.2.2	Land Ownership	15	07.6	Riverpark Village Precinct	56
04.2.3	River / Creek Setback	16	07.7	Marina Commercial Precinct	62
04.2.4	Rowing Course Setback	17	08.	PERFORMANCE MEASURES	68
04.2.5	Flooding	18	08.1	Development Controls	69
05.	KEY URBAN DESIGN STRATEGIES	19	08.1.1	Existing Controls	69
05.1	Visual Connections	20	08.1.2	Compliance with the Masterplan	69
05.2	Preserving + Integrating Public Buildings + Spaces	21	08.2	Car Parking	70
05.3	Natural Domain	22	08.3	Landscaping	72
05.4	Defining Main Street + Gateways + Pedestrian / Cycleways	23	08.4	Floodplain Management	76
05.5	Defining Public Spaces	24	08.5	Subdivision	76
05.6	Traffic + Infrastructure	25	08.6	Heritage	76
06.	THE MASTERPLAN	27	08.7	Stormwater Management	76
06.1	Development Masterplan	28	08.8	Sustainability	79
06.1.1	Public + Private	29			
06.1.2	Land Use Plan	30			
06.1.3	Land Use Form	31			

Prepared by:

Suters Architects in collaboration with,

S-Lab, Steffen Lehmann

McGregor Partners

Arup Sustainability

Connell Wagner

Asquith & DeWitt



Taree, NSW

Figtrees on the Manning represents a unique opportunity in Taree to create a major and vibrant mixed use waterfront development that will help consolidate Taree as a major regional centre.

There will be a range of development outcomes including commercial and retail outlets, residential units, modern adaptive reuse of some of the substantial old dairy factory buildings, and a commercial marina. The commercial marina and a proposed 'boatel', will encourage boating use of the wonderful Manning River.

The development will underpin revitalisation of the site and allow a range of wonderful outcomes for the public. Including:

Objectives of the Masterplan

- To provide for a mix of landuses that will drive development of the site and achieve good private and public landuse outcomes.
- To ensure that redevelopment of the site will provide essential connections to Taree CBD as a Regional Centre, the adjacent residential precinct and the natural features of the site.

- To create a delightful public domain.
- To optimise utilisation of the waterfront location.
- To maximise the benefits from adaptive re-use of existing buildings and infrastructure on the site.
- To create a building form and envelopes that will achieve economic development and maximise amenity on the site and in the neighbourhood.
- To achieve an appropriate scale of development.
- To provide for and encourage boating activity.
- To effectively and efficiently provide transport facilities for cars, pedestrians and cyclists.
- To incorporate and demonstrate environmental sustainability and energy efficiency in the proposed development.

- To create a great sense of place in the design, and qualities in the development outcome.
- To achieve beauty, liveability lifestyle choice and make the site a very desirable place to live or visit.

The heritage qualities of the site will not be lost through redevelopment and reuse. The dairy and maritime history of the area will be presented in a museum as an adaptive reuse of the old generator building. A number of old substantive dairy factory buildings will be adaptively redeveloped for use as growers markets, coffee shops and restaurants, and these outlets will also provide an opportunity to present elements of the site's history. Naming competition run in the local community, has turned up a number of options to name aspects of the redevelopment after historic activities on the site. The old railway alignment will be retained as a cycle and pedestrian pathway through the site.

Overall the vision is to create a distinctive and vital urban redevelopment area with a quality public domain while optimising the utilisation of this wonderful waterfront location.



This Local Area Plan (LAP) records the outcomes of the master planning process and community consultation for the Figtrees on the Manning site. The project represents the joint venture between GTCC and the three major land owners of the site and has seen significant involvement from the community in developing the urban design solution for the area. It commenced with a national design competition with Suters Architects and their consultant team of s_Lab, McGregor + Partners, ARUP, Connell Wagner and Asquith & DeWitt being engaged to complete the Masterplan.

The Figtrees on the Manning development presents a unique opportunity within Greater Taree for a high quality mixed-use development of broad regional significance. It proposes to maintain the existing qualities of the area, including both the natural elements

and built structures, endeavouring to create a vibrant and diverse community that is rich with the social, economic and environmental experiences of a fully realised urban tapestry. It will offer a community that celebrates past, current and future contexts and one that contributes robustly and positively to the development of Taree and the Waterfront Precinct along the Manning River.

The Masterplan is comprised of five precincts that each offer a different but complementary use which demonstrates the diversity of development potential for Figtrees on the Manning.

The first precinct forms the gateway to the site utilising the existing spotted gum reserve, rail corridor and modestly sized residential buildings to create a place which is inviting and encourages people

to enter and explore the site. The second precinct is proposed as a business hub comprised of high quality mixed use development that breaks out onto public domain areas and the waterfront. The unique character of the third precinct is based on reusing the magnificent existing heritage buildings and opening up the waterfront for people to live, work, play and interact together. The aim for the fourth precinct is to create a residential village within scenic existing landscape elements of the creek and the river. The fifth precinct will gain its unique character with the creation of a commercial marina – the working waterfront.

The LAP is intended to be read in conjunction with all other guide lines and controls relevant to the proposed development for Figtrees on the Manning.



03.1 Planning + Design of the Masterplan

In preparing the Masterplan the importance of the site was recognised as a catalyst to strengthen Taree's relationship to the waterfront. The site is located between the Botanical Gardens and the Entertainment / Sports and Recreation Precinct. The key vision of the Masterplan is to connect these two places with the Figtrees on the Manning precinct and form a necklace of precincts that activate the entire waterfront.

The proposal for these five precincts is for them each to have their own unique character providing a diversity of uses across the site. The various functions performed by each precinct result in a mixed use outcome benefitting the wider community.

Each precinct's various built elements segment the open space. Through the use of different materials in the landscape as well as the mix of the reused heritage buildings and contemporary architecture, a variety of spaces will be created providing both visual and physical dynamic experiences. Components of the design include hard and soft treatment of the water edge, floating river pool, viewing platforms, river stairs, pavements, timber decks, boardwalks, lighting, lawns, native trees and vibrant planting beds.

Consideration has been given to developing the flood prone land that occupies the majority of site. To limit the impact on the environment two major initiatives have been introduced: development is restricted

to ground above the flood level as much as possible limiting the effect on the flood line and it is also proposed that development will occur on a series of podiums were necessary to raise it above the flood line.

Therefore a responsible and sustainable urban design solution has been established as the appropriate model for the Figtrees on the Manning Masterplan.



03.2 Place Capital + Gap Analysis

Taree

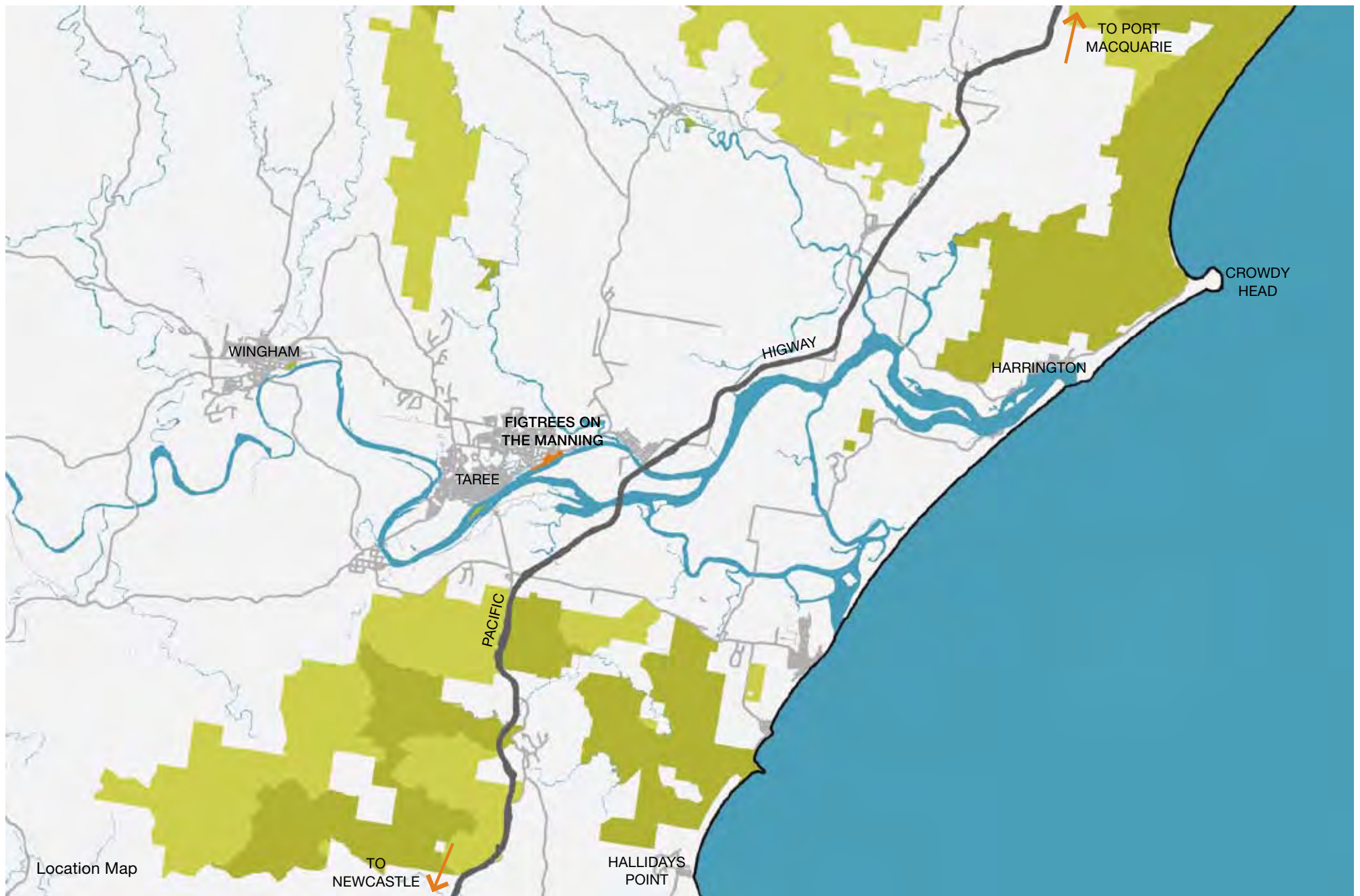
- Regional service centre
- Manning Valley / National Parks
- Stop in for northern bound traffic
- Agricultural produce
- Leisure / Culture / Education / Unique Heritage

Existing

- hotel
- motel
- promenade
- cinema
- sport
 - regional centre
- health
- water sports
- retail
- pubs
- residential
- finance
- education
 - private
 - public
 - tafe
 - colleges
- transport
- automotive
- agriculture
- horticulture
- equine
- showground
- entertainment
- fishing
- rail
- XPT
- bypass
- dairy
- bus route
- airport
- entertainment centre
- aquatic centre
- racecourse

Gaps

- limited river connections
- art
- serviced apartments
- pedestrian link
- restaurants / seafood
- family / organic / farmers market
- music venue
- urban scale parks
- night club
- business incubation
- reception / wedding facilities
- bus station / break
- function space
- youth hostel
- child care
- motel / boatel
- waterfront
- sailing / yachts
- dry dock / marina / boat building
- fishing tours
- cruisers
- whale watching
- youth services
- tourism
- day spa
- health / fitness
- alternative housing
- cycling centre



04. DEVELOPMENT CONTEXT

04.1 Context Analysis

04.1.1 Mid North Coast Regional Strategy

The Mid North Coast Regional Strategy provides for balanced growth of the region. The strategy aims to protect the coast by focusing new settlement in areas identified on local strategy maps.

Taree is identified as a major regional centre. Major regional centres are expected to accommodate medium to higher density living, business, employment and professional services.

Taree has the land and infrastructure to support significant industrial and residential growth. Taller buildings are encouraged around Taree town centre.

The growth of Figtrees on the Manning, in accordance with the Masterplan, will provide for residential and business development consistent with the Regional Strategy.

04.1.2 Local Area Strategy

Figtrees on the Manning is currently zoned for rural, residential, open space and industrial uses.

The future of Figtrees on the Manning is established in the Taree Conservation and Development Strategy.

This strategy identifies the following opportunities:

- promotion of tourism
- provision of water front activities
- boating and marinas
- water based tourism
- links to Taree CBD









04.1.5 Context Height + Scale

Taree is a regional city with most buildings having low heights and modest scales.

Larger buildings are typically found in the main street but are otherwise dispersed and found on larger sites or adjoining infrastructure corridors. The biggest buildings usually relate to past or continuing rural industry.

The Figtrees on the Manning site has an association with the dairy industry and maritime services. Buildings of an industrial nature remain on parts of the site.

New development on the Figtrees on the Manning site should complement the regional city of Taree. It should allow height and scale consistent with main street development of Taree and those of the local rural industry while introducing a variety of bulk and scale across the site to both the streetscape and waterfront.



04.2 Site Analysis

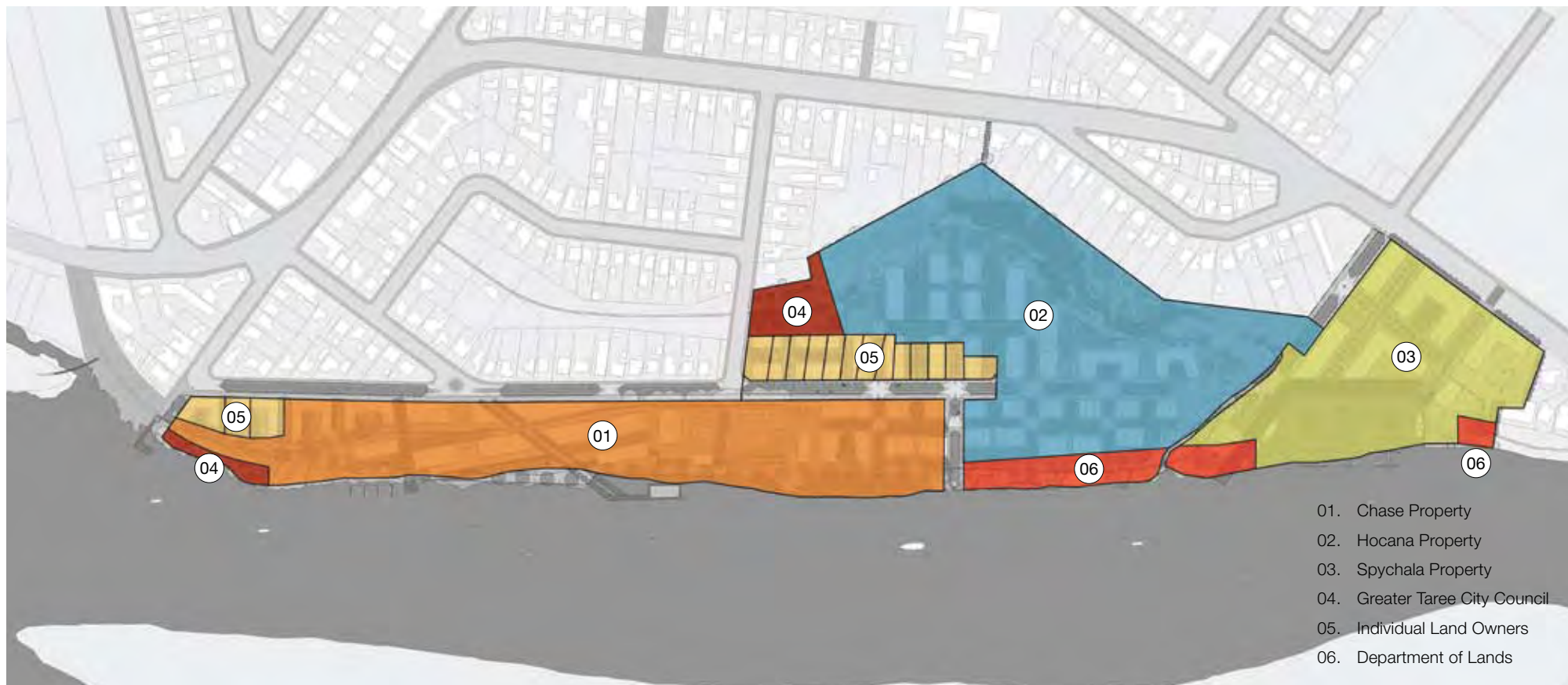
04.2.1 Location

The project site is located between the Manning River (North Arm) and Pitt Street in Chatham, Taree. The site is bordered to the north by Pitt Street, existing residential development and Chatham Avenue and to the south by the Manning River. The Botanical Gardens are located beyond Browns Creek to the west.

Satellite urban areas occur at Cundletown to the east, Taree South and Purfleet to the south, Tinonee to the southwest and parts of Wingham to the west. The surrounding area is characterised by a mixture of low and medium density residential, commercial, light industrial uses and rural agricultural lands. Located to the east of the

site is the Taree Entertainment Centre and Taree Airport with the CBD of Taree approximately 2km to the southwest.

Chatham Avenue is the main entry road into Taree from the east. Commercial uses such as car dealers and motels characterise Chatham Avenue. Chatham Park is located just north of Chatham Avenue.



04.2.2 Land Ownership

Ownership of the Figtrees on the Manning site is fragmented. The majority of the site is under three ownerships. This concentration of ownership is an opportunity as the planning and design of larger land parcels is more certain and allows for the ready creation of individual precincts reflecting location, past ownership and historical use.

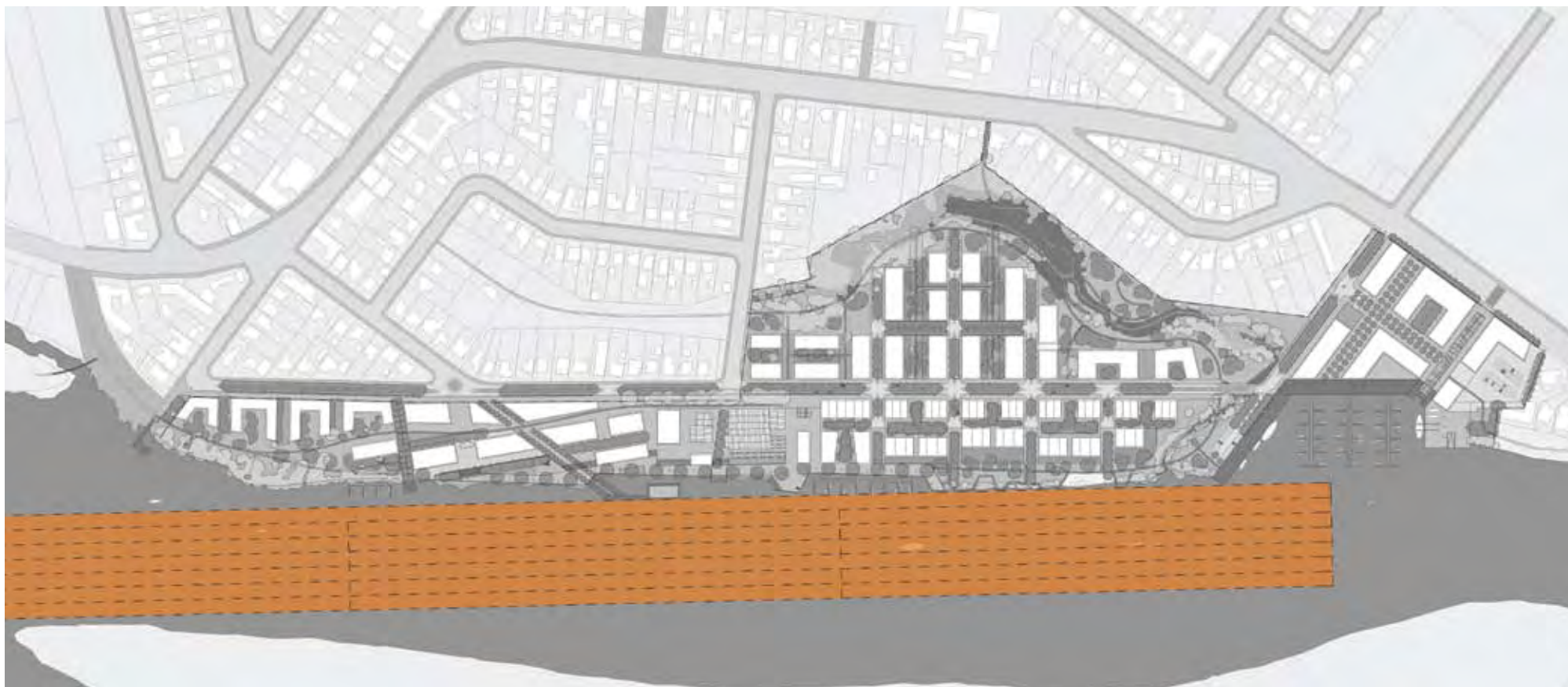


04.2.3 River / Creek Setback

Figtrees on the Manning is dominated by waterfront. Waterfronts are both an opportunity and a constraint.

Appropriate setbacks are required to address waterfront constraints such as flooding and to provide for opportunities such as public open space, visual amenity, natural corridors and tourism.

A setback that links the built and natural elements of the site and provides for a mix of waterfront uses is sought.



04.2.4 Rowing Course Setback

The rowing course is a major sporting and tourism asset. The physical integrity of the course must be maintained.

Development along the rowing course waterfront must not encroach on the rowing lanes and should complement and enhance the experience for rowers and spectators.



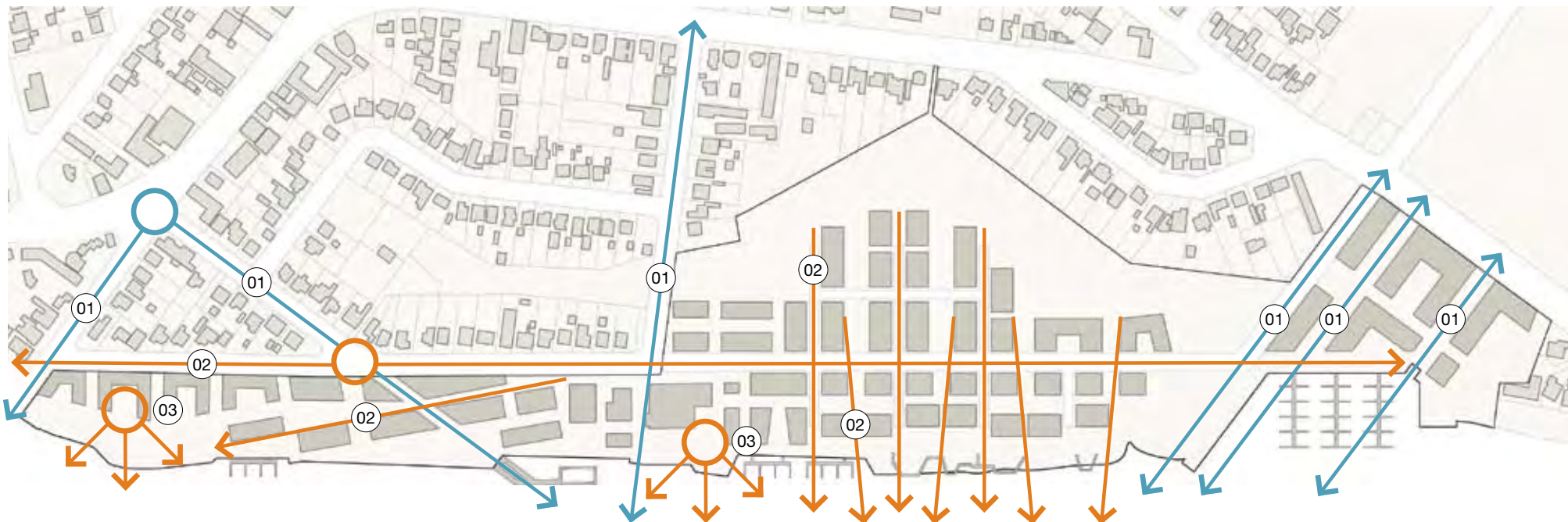
04.2.5 Flooding

Major flooding is a very infrequent but significant hazard.

Development can occur in flood prone areas provided people and property are not subjected to unnecessary or unacceptable risks.

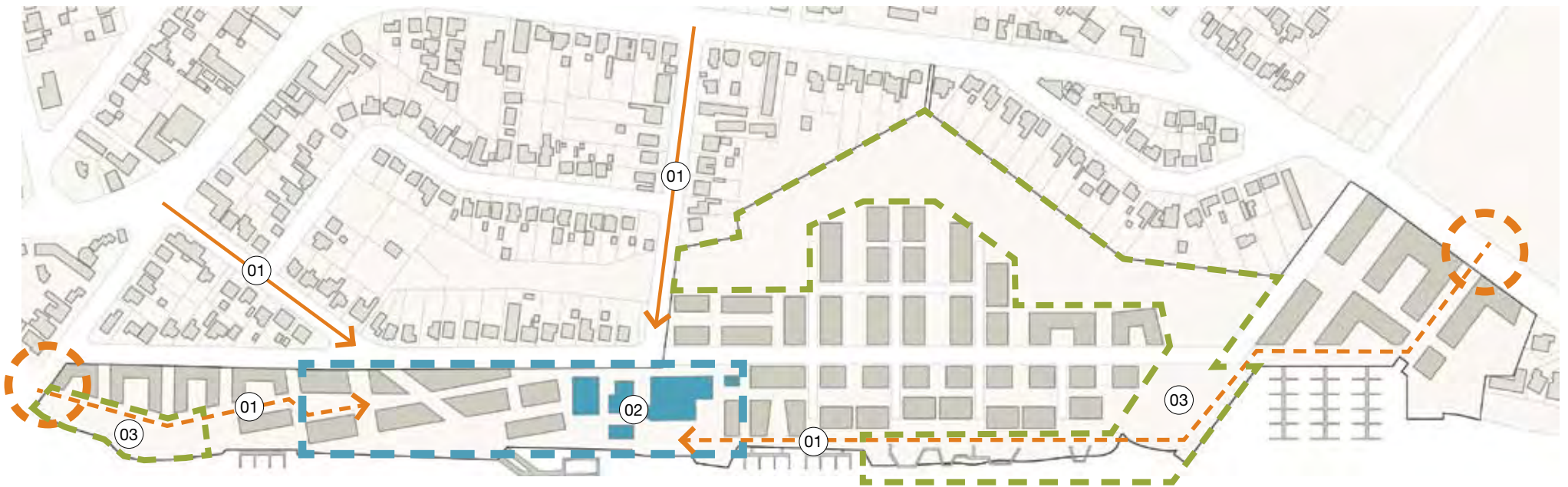
Setbacks from the river can ensure that buildings are placed out of high hazard areas.

05. KEY URBAN DESIGN STRATEGIES



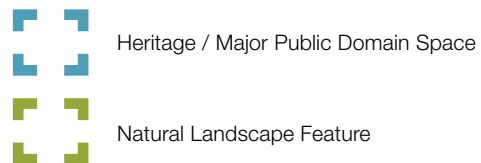
05.1 Visual Connections

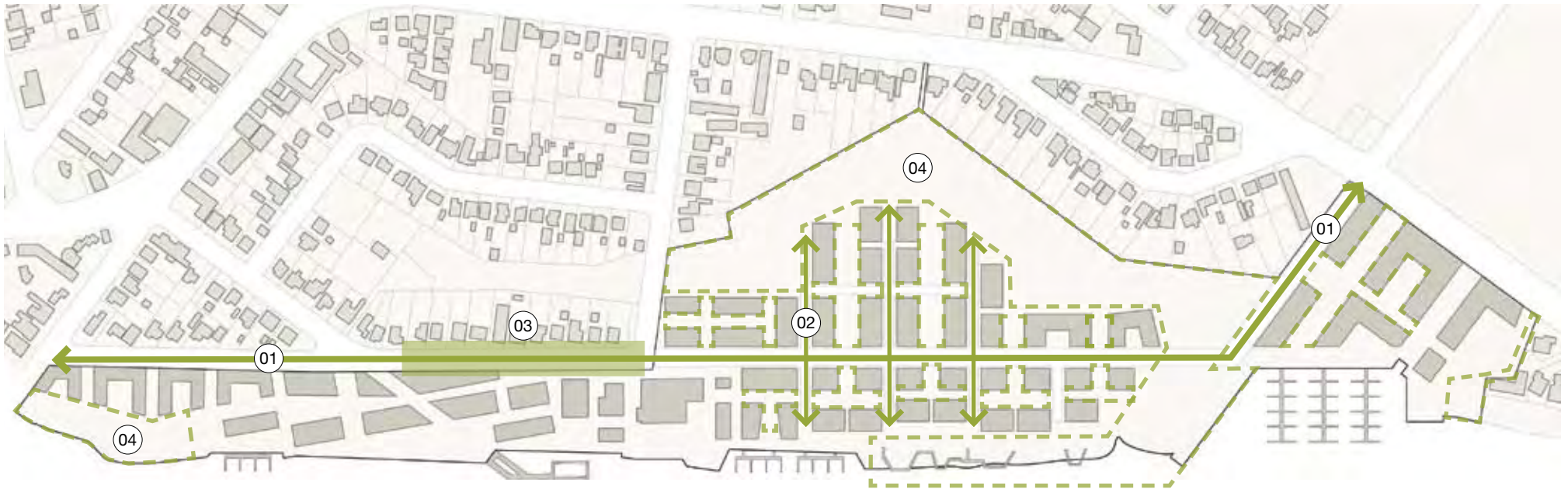
- 01. Enhance key view corridors to and from the site connecting the river and character of native vegetation to the town.
- 02. Create view corridors in development planning to foster a link in built form and natural landscape.
- 03. Establish built form that harnesses the natural aspect of the site.



05.2 Preserving + Integrating Public Buildings + Spaces

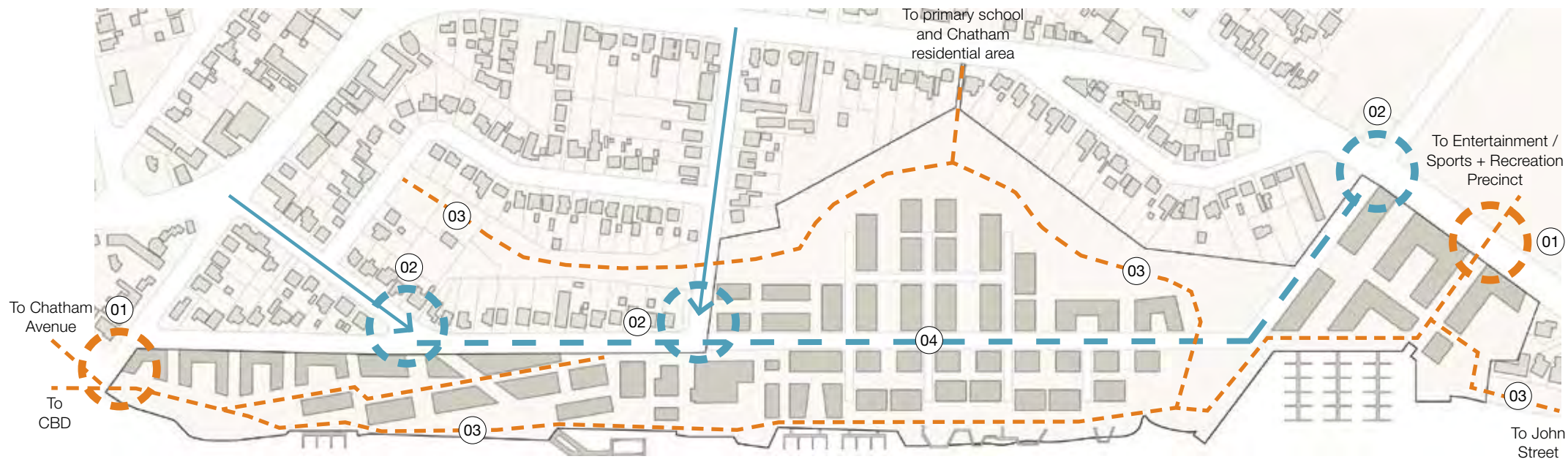
- 01. Establish a relationship between local context and site through preservation and integration of existing heritage buildings and development of public space.
- 02. Integrate and respect existing heritage buildings.
- 03. Integration of existing landscape features.





05.3 Natural Domain

- 01. Primary level of street landscaping.
- 02. Secondary level of street landscaping.
- 03. Integration of key site landscape element.
- 04. Rehabilitation and preservation of landscape and riparian zones providing contiguous and permeable green space throughout the site.



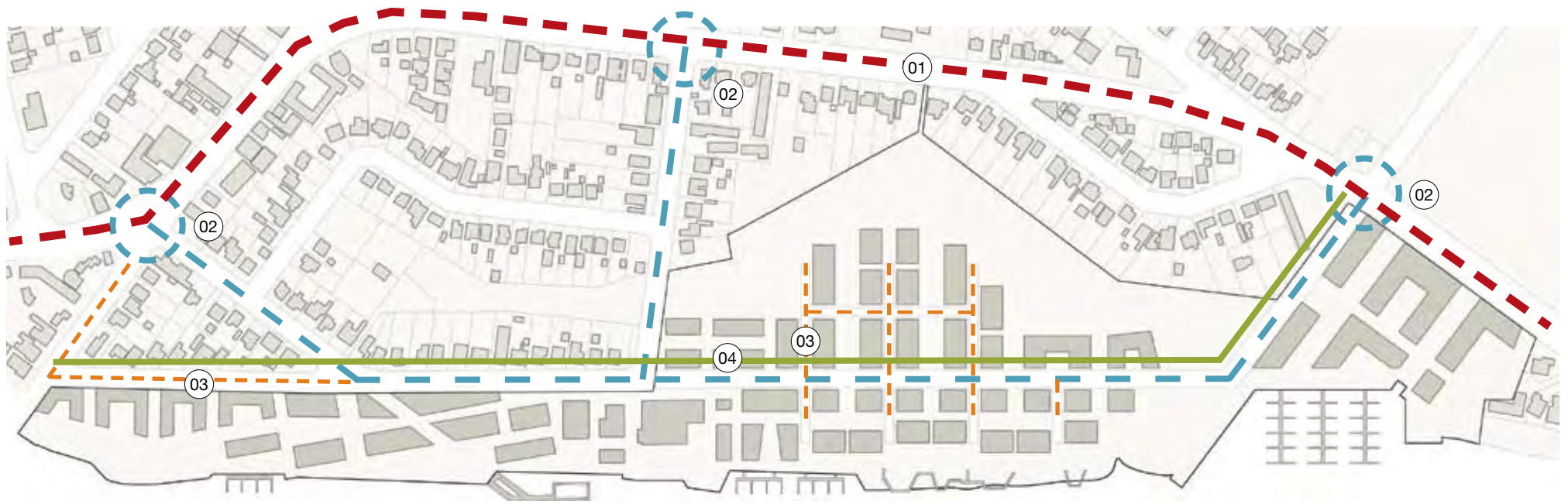
05.4 Defining Main Street + Gateways + Pedestrian / Cycleways

01. Define major pedestrian / cycleway gateways to site.
02. Define main street gateways to site.
03. Establish major pedestrian / cycleway throughout site.
04. Establish main street.



05.5 Defining Public Spaces

- 01. Develop key landscape zones for public activity.
- 02. Establish key public infrastructure throughout site.



05.6 Traffic + Infrastructure

- 01. Maintain main traffic connection to town centre.
- 02. Establish key intersections and primary streets for site traffic.
- 03. Establish secondary street level for residential development.
- 04. Fibre-optic cable through site.



Taree CBD, NSW



06.1 Development Masterplan

- | | | |
|--|---|---|
| 01. Alignment of Existing Rowing Course | 12. Water detention / quality feature | 22. Beach |
| 02. Pedestrian Connection to Chatham Avenue | 13. Car Parking for Commercial Area | 23. Commercial Marina |
| 03. Urban Riverside Plaza With Constructed Edge To Water | 14. Shared Cycle Way + Footpath on Existing Railway Line | 24. Boatel Marina |
| 04. Retail Plaza | 15. Children's Play Area | 25. Boat Ramp |
| 05. Nelson Street Park | 16. Public Artwork / Sculptural Element | 26. Boat Crane on Timber Deck |
| 06. Wetland Park | 17. Raised Boardwalk + Bridges along river + Creek to connect Marina + Residential Precinct | 27. Existing Eucalyptus Community to be retained |
| 07. Pitt Street – Garden Boulevard | 18. Viewing Platform | 28. Existing Mangroves to be Retained |
| 08. Communal Gardens | 19. Floating Jetty | 29. Existing Fig Trees on Pitt Street to be retained |
| 09. External Seating / Dining Areas | 20. Bridge to Connect to Botanical Gardens | 30. Wetland Area with Native Aquatic Planting |
| 10. Floating River Pool / Stage | 21. Water Feature | 31. Stormwater Filtration Biotope / Bioswale with Native Wetland Planting |
| 11. River Stairs | | |

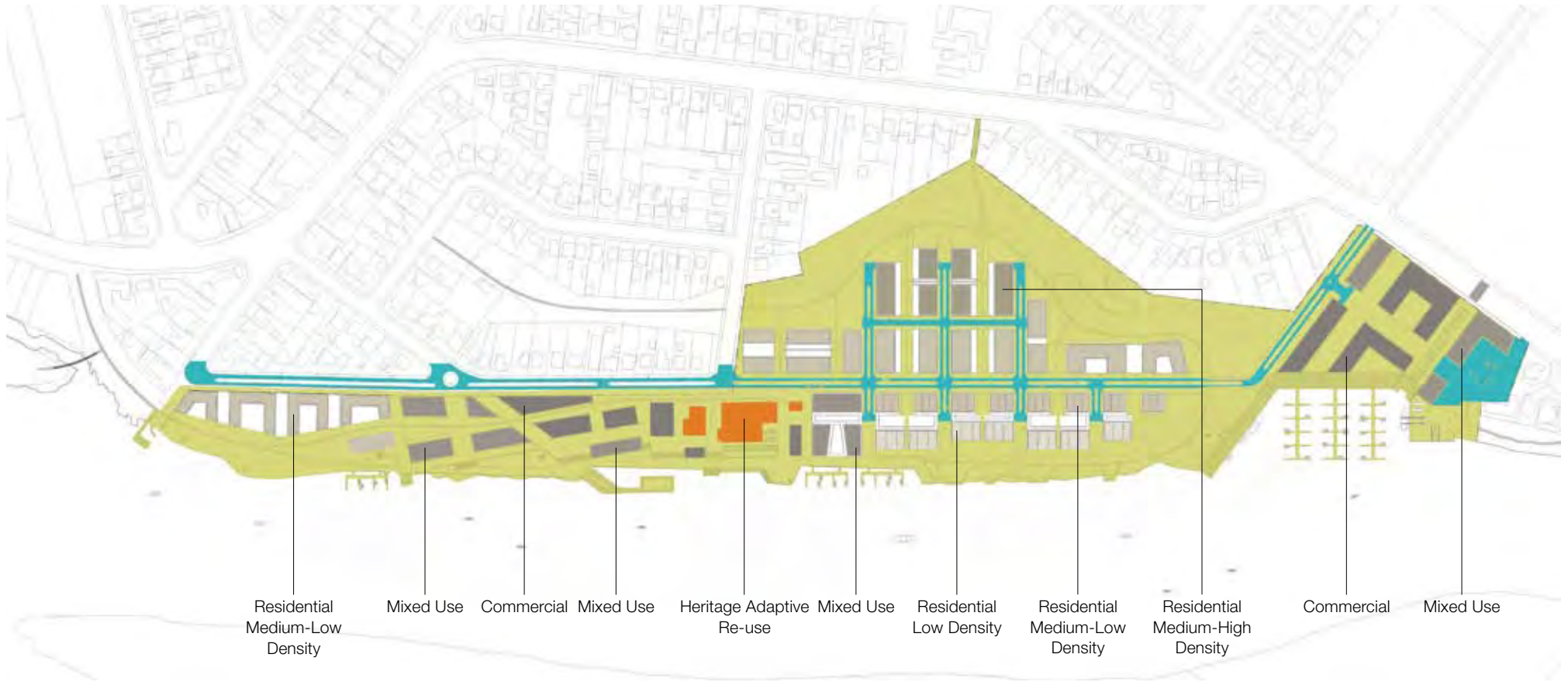


06.1.1 Public + Private

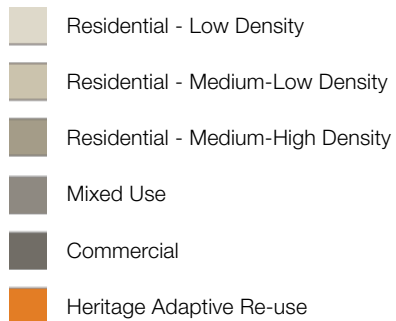
The Figtrees on the Manning proposal is for a residential and commercial development with a marina and community facilities that occupy the waterfront. Great consideration was given to developing the public domain aspects of the Masterplan. The scheme provides for a large expanse of publicly accessible space with areas of privately owned land dedicated for community use. The key vision for the Masterplan to connect Botanical Gardens and the Entertainment / Sports and Recreation Precincts of Taree established a link through the site via pedestrian paths, cycleways and boardwalks. This allows direct public access to the waterfront for the full length of the site and creates a multitude of unique development opportunities within the five precincts.

Key

- Public Space
- Privately Owned Space
- Public Accessible Privately Owned Space



06.1.2 Land Use Plan





06.2 Diagrams

The following diagrams illustrate the public domain components of the Masterplan.



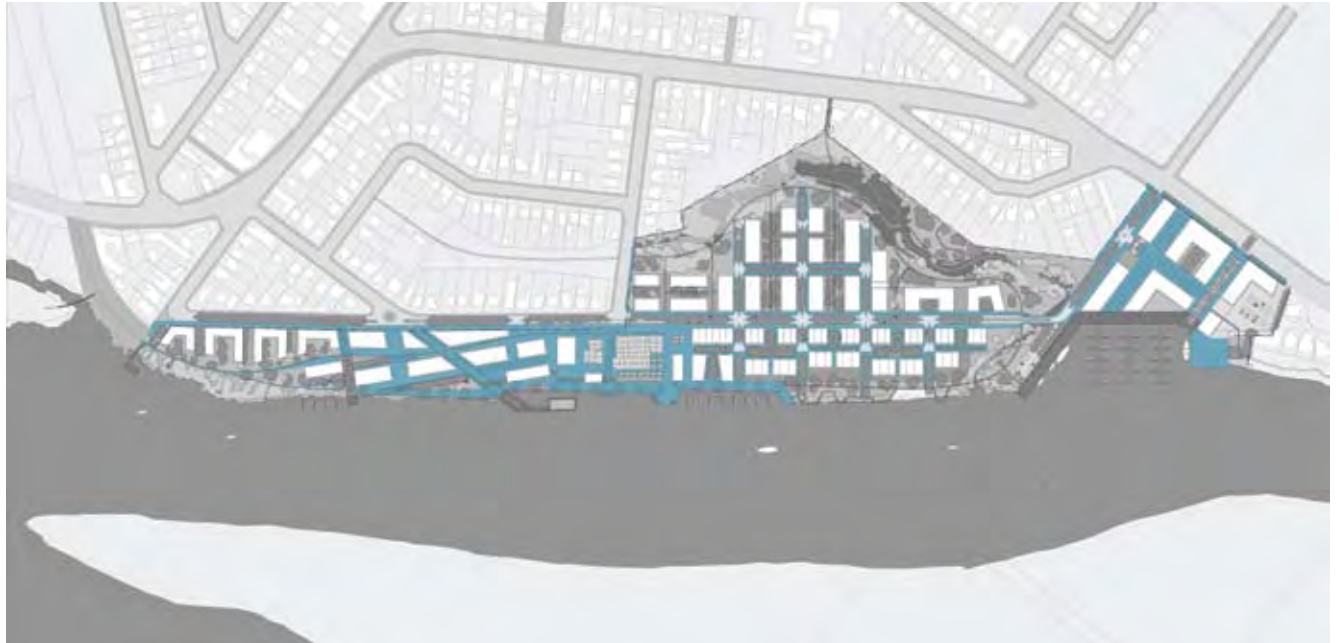
06.2.1 Images

Images of potential for Figtrees on the Manning to be an inviting area in which to live, work and play.



06.2.2 Plaza + Paving

The main pedestrian access is from Pitt Street. All proposed roads have a footpath system. A key and integral part of the proposed development is a pedestrian connection from the CBD via the Botanical Gardens along the Manning River to the Entertainment / Sports and Recreation Precinct. A bridge over Browns Creek to the west of the development forms a major connection to the Botanical Gardens. The existing railway line will be reused as shared cycleway and footpath. A promenade along the river and the various precincts that front it will allow the community to experience the water in an urban context. A Wetland Park provides a path system along the creek. A pedestrian access from Chatham Avenue provides a connection through the site to the Manning River.



06.2.3 Landscape

The riverine vegetation within the subject site forms part of a network of corridors. The main ecological function of these corridors is to provide connectivity for both the movement of fauna and for the local exchange of genetic material between native flora species. This would tend to reduce the risk of local flora populations becoming isolated. Since the land in the Taree urban area has mostly been highly cleared for public or private infrastructure, the vegetation may also represent one of the last refuges in the local area of many native flora species. This is the case with the strips of remnant native vegetation along the creek and the riverbank. Please refer to the Ecological Constraints Assessment (August 2007) for more information.



06.2.4 Boardwalk + Jetty

Through the marina, jetties, viewing platforms, boardwalks and river pool / stage Figtrees on the Manning establishes a direct relationship with the waterfront making it accessible to all for recreational use.



06.2.5 Existing Trees + Vegetation

It is proposed to integrate, revegetate and retain where appropriate the Spotted Gum/Ironbark/Stringybark Forest, the Mangrove/Marine Riparian Forest, the Freshwater Reedland, the Freshwater Riparian and the Fig Trees on Pitt Street. There are varying levels of disturbance to allow the achievement of a mixed use development that will achieve social and commercial outcomes while respecting appropriate aspects of the natural environment.



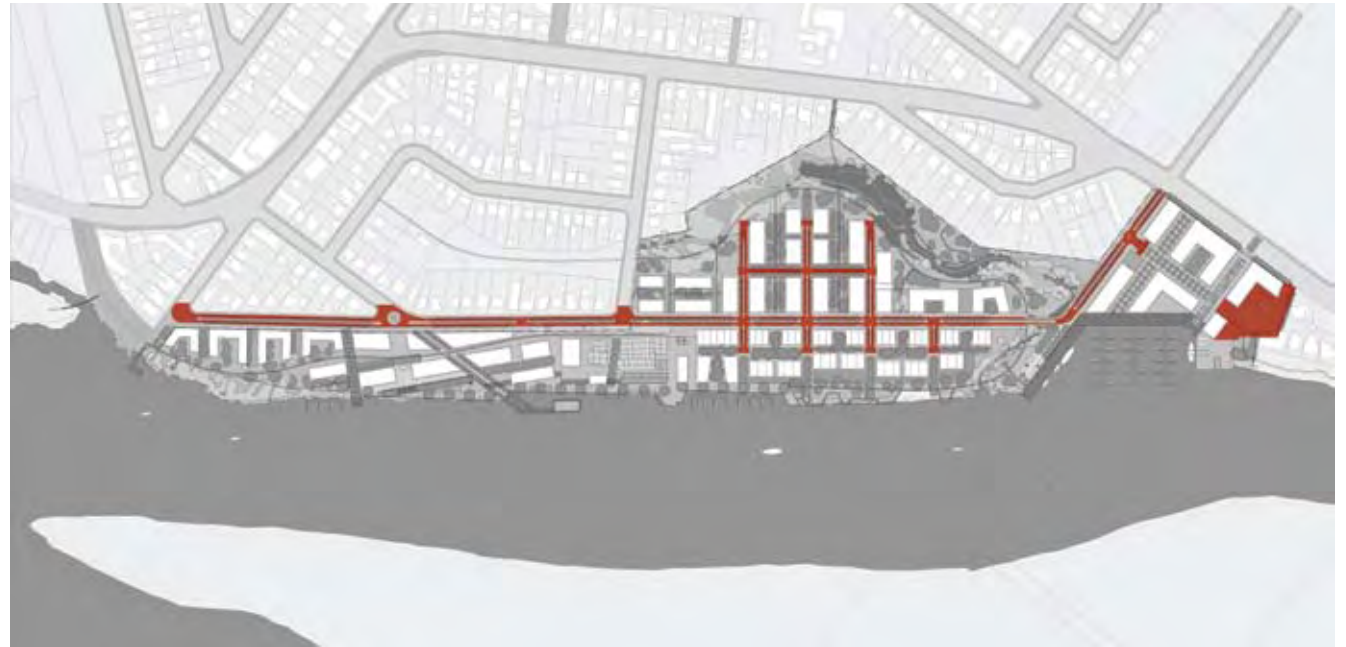
06.2.6 Proposed Trees + Vegetation

The design philosophy for the Landscape Architecture of the project encompasses expression of the remnant cultural heritage of the site through retention of most existing trees, reuse of most existing heritage buildings and refurbishment of the site. The project aims to fully adopt ecologically sustainable design principles. The design approach is influenced by the discipline of 'urban ecology', where the site design components are integral to the project's social, environmental and ecological systems. The primary site design objective has been to work with natural amenities such as flora and fauna, existing trees, existing topography, flood levels and setbacks from river and creek.



06.2.7 Road Network

The extension of Pitt Street to the northeast is proposed to provide access to the residential development. A turning head on the eastern end of Pitt Street will be designed as a small plaza. Four residential access ways to the south and three to the north are proposed to turn off Pitt Street. The three access ways in the north are connected with a residential loop road designed for passive surveillance and traffic calming. All residential roads lead into basement parking.

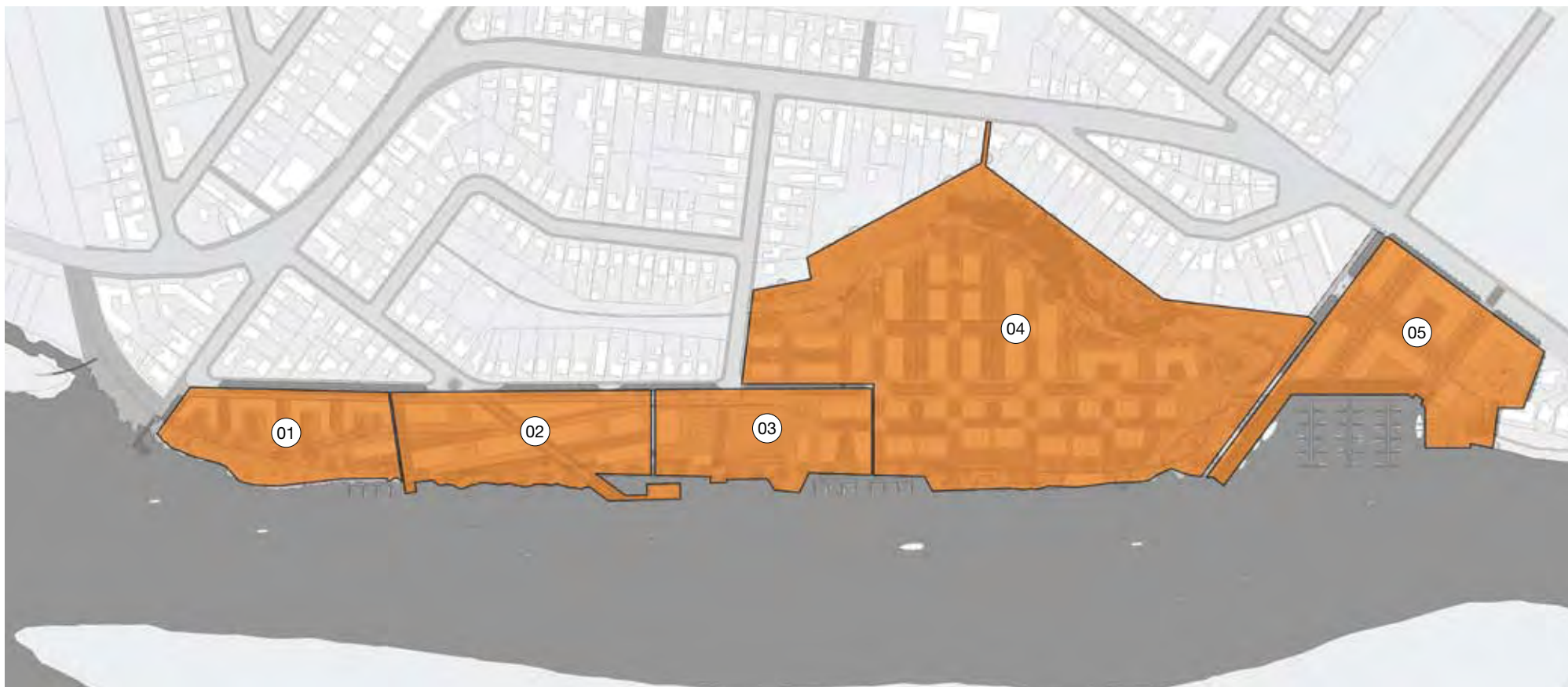


06.2.8 Basement + On Road Car Parking

Parking is to be predominately underground utilising the fall of the site and the need to keep buildings above the 1 in 100 year flood level. Parking will far exceed required parking for built form ensuring plentiful public parking to the river side of Pitt Street. Angle / parallel parking along Pitt Street will provide more opportunistic parks and provide a traffic calming effect.



07. CHARACTER PRECINCTS



07.1 Five Precincts

The proposal is for five main precincts, all with their own distinctive character and identity. The precincts are linked by road, pedestrian paths and cycleways.

01. Gateway Residential Precinct
02. Figtree Commercial Precinct
03. The Dairy Heritage Precinct
04. Riverpark Village Precinct
05. Marina Commercial Precinct

Mixed Use Definition

Mixed Use allows for a combination of Residential and Commercial uses.

- Commercial component could include: general office; general retail; cafes and; restaurants.
- Residential component is preferred to be incorporated in all Mixed Use areas and includes: permanent residential dwellings; serviced apartments and; short to medium term accommodation.

Commercial Definition

Commercial allows for a variety of more specific commercial activities and could include: retail; office; hotels; motels; boatels; pubs, clubs; night clubs; function centres; cinemas; function spaces; cafes; restaurants; take-aways; markets; health and fitness facilities; cultural facilities and; community facilities.



07.2 Gateway Residential Precinct

The Gateway Residential Precinct fronts Pitt Street on the north and the river to the south, and forms the western gateway to the site. It overlooks the natural ironbark and spotted gum reserve, historic railway cutting and walking tracks to provide many comprehensive vistas along the Manning River and into the public domain. The built form is of modest scale with predominantly three storeys which steps down to the adjoining residences and opens towards the river and public spaces, defining an ambient open area that encourages people to meet, interact and relax.





- Retention of the existing Eucalyptus community on the river and the Fig trees on Pitt Street provide the site with a pleasant environment and reduce the visual impact of the built form.
- The Nelson Street Park is the 'Gateway' into the site from the west. Entering either from the Botanical Gardens or Nelson Street through the old Railway corridor will be an extraordinary experience. After passing the raised old Eucalyptus community on the right and residential development on the left, the space will open up into wide Parkland with lawn, a children's play area and a picnic/BBQ area.
- The disused rail corridor is to be adapted to provide a pedestrian / cycleway through to the foreshore promenade.
- Casual viewing, picnic and children's play areas are provided sporadically throughout the site.
- A pedestrian / cycle bridge will be constructed over Browns Creek to create a link along the Manning River to the CBD.
- It is proposed to extend the site to the west along the rail corridor to provide a pedestrian connection to Chatham Avenue.



Development Lots

R = Roof and loft space

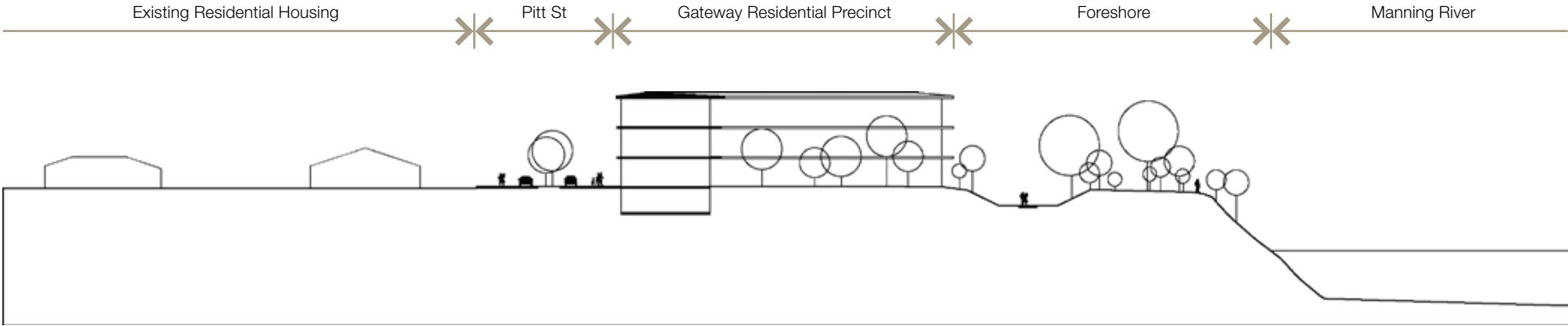
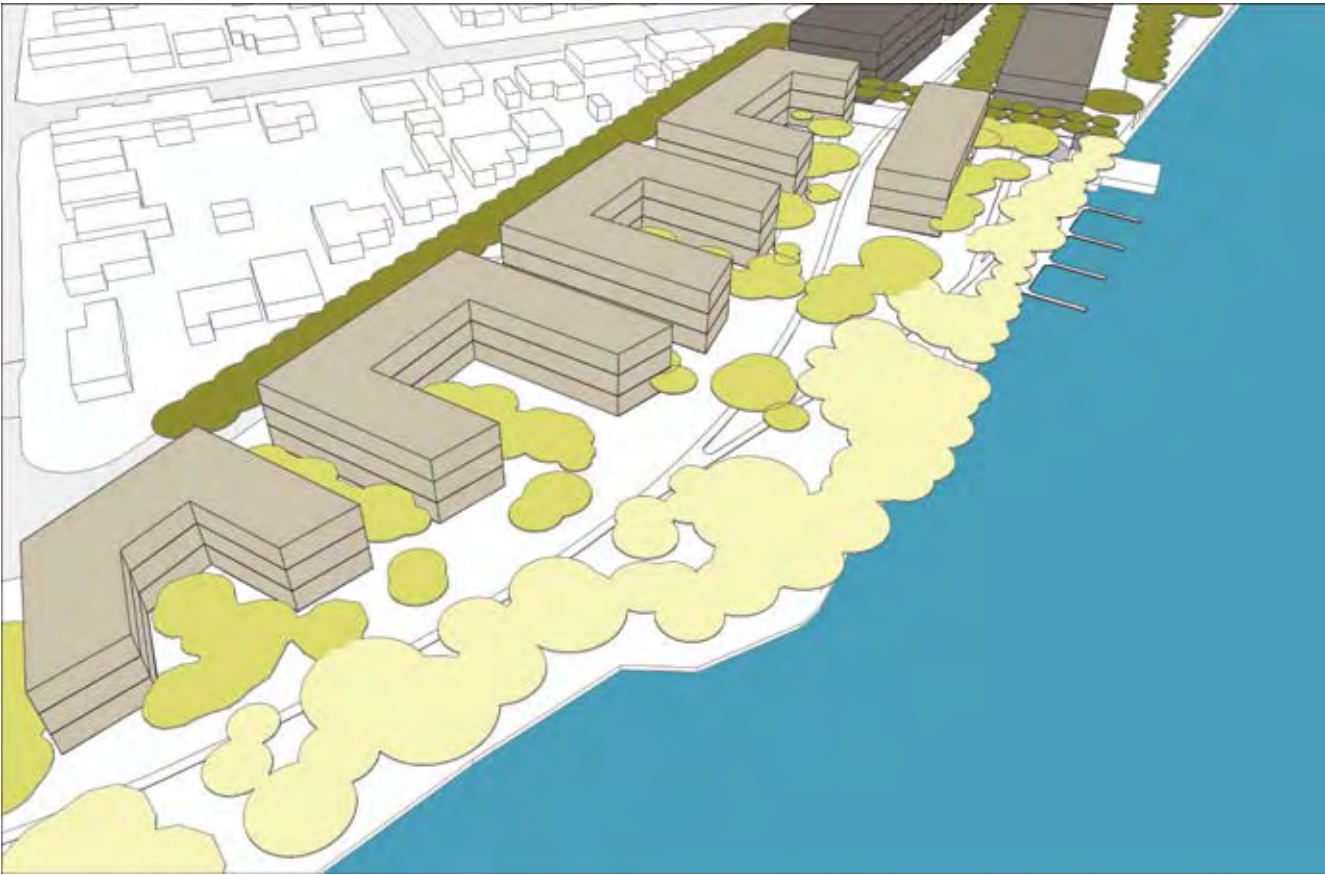
Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
1A	1 230	2.0:1	3 Storeys	10 + R	Residential	6m from Eastern Boundary	Medium-Low Density
1B	2 340	1.5:1	3 Storeys	10 + R	Residential	6m from Eastern + Western Boundary	Medium-Low Density
1C	2 150	1.5:1	3 Storeys	10 + R	Residential	6m from Eastern + Western Boundary	Medium-Low Density
1D	1 620	2.0:1	3 Storeys	10 + R	Residential	6m from Western Boundary	Medium-Low Density
1E	615	2.0:1	2 Storeys	8.5 + R	Residential with associated marina berths	No setbacks from boundary	Medium-Low Density



Suggested Building Envelope

Key

- Residential - Low Density
- Residential - Medium-Low Density
- Residential - Medium-High Density
- Mixed Use
- Commercial
- Heritage Adaptive Reuse





Artist's Impression



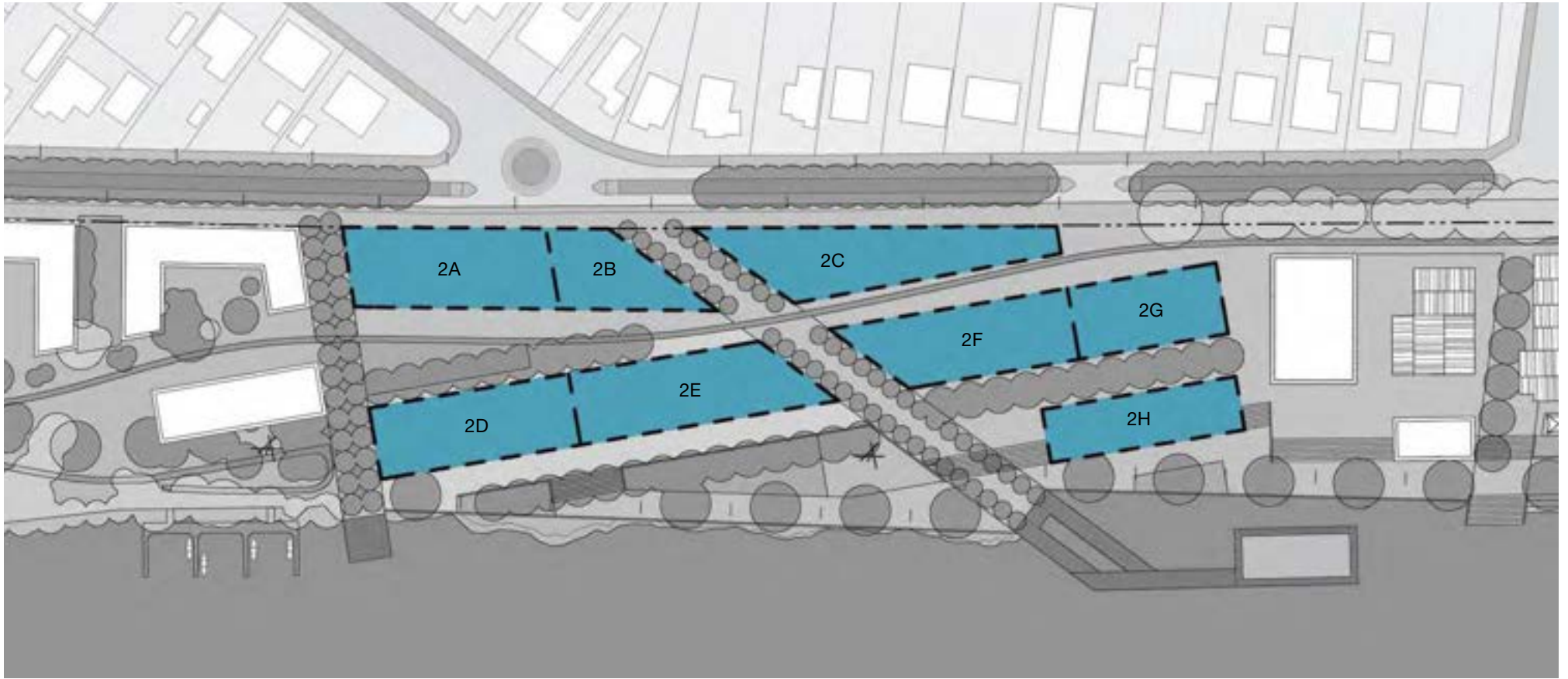
07.3 Figtree Commercial Precinct

The business hub of the proposal, this precinct incorporates mixed uses including high quality and speciality restaurants and cafes opening out to the terraced public domain areas. Commercial office is Green Star rated with professional residences over. Accommodated in buildings ranging from three storeys to a maximum of five storeys in height this precinct provides a public plaza containing external seating and dining areas as well as selective landscaping and terraced paving which activates the hard edged urban waterfront.





- The park character turns into a more urban promenade along the water edge and its adjacent heritage buildings.
- Construct urban riverside plaza and provide external seating and dining areas and plant trees to create a pleasant environment.
- Commercial building opportunities.
- Connection to fibre optic cable in Pitt Street.
- Jobs for new/existing residents especially as home-based occupations and separate lifestyle.



Development Lots

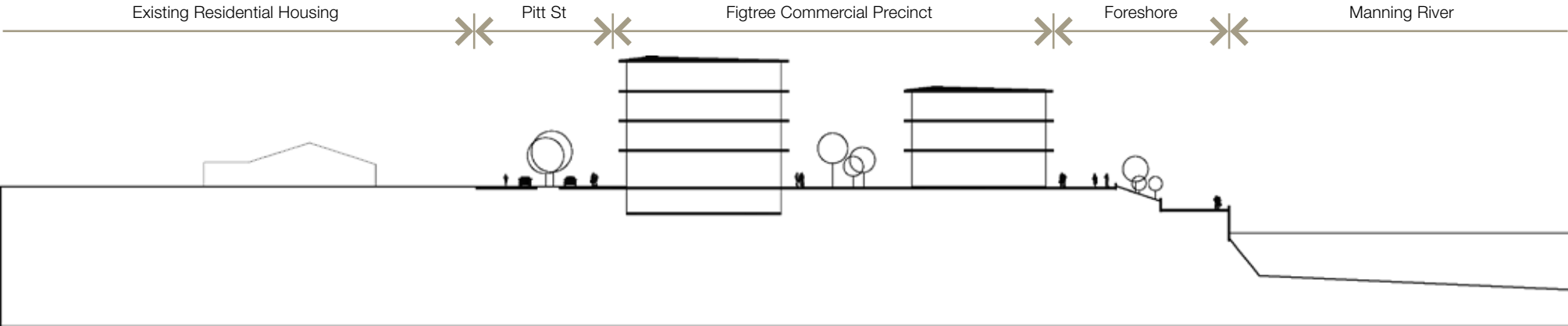
R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
2A	1 250	2.5:1	4 Storeys	15.6 + R	Mixed Use	10m from Eastern Boundary	Medium Density
2B	700	2.0:1	4 Storeys	15.6 + R	Mixed Use	10m from Western Boundary	Medium Density
2C	1 360	4.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Medium Density
2D	1 125	2.5:1	3 Storeys	11 + R	Mixed Use	10m from Eastern Boundary	Medium Density
2E	1 265	2.5:1	3 Storeys	11 + R	Mixed Use	10m from Western Boundary	Medium Density
2F	1 150	3.0:1	4 Storeys	15.6 + R	Commercial	6m from Eastern Boundary	Medium Density
2G	840	3.0:1	4 Storeys	15.6 + R	Commercial	6m from Western Boundary	Medium Density
2H	820	3.0:1	3 Storeys	11 + R	Mixed Use	No setbacks from boundary	Medium Density



Suggested Building Envelope

- Key
- Residential - Low Density
 - Residential - Medium-Low Density
 - Residential - Medium-High Density
 - Mixed Use
 - Commercial
 - Heritage Adaptive Reuse



Artist's Impression



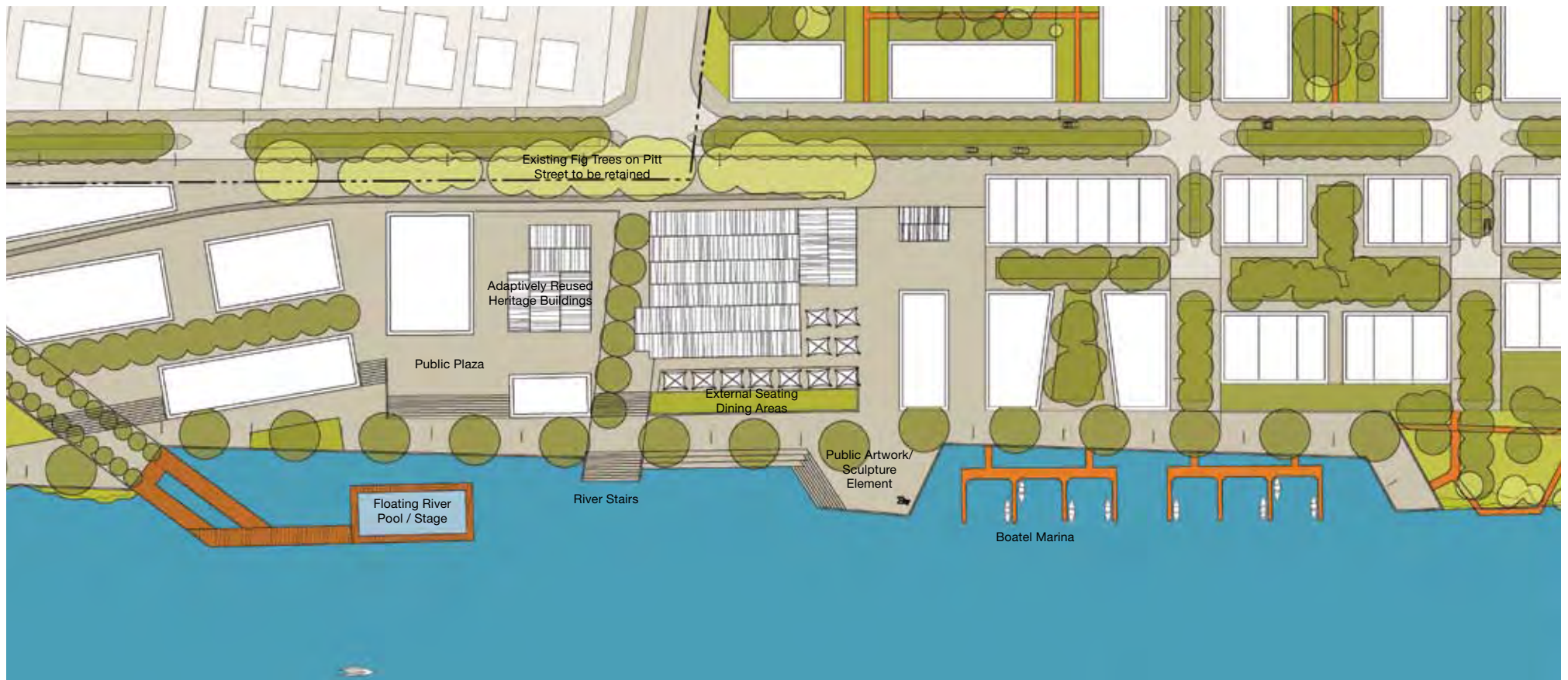
Artist's Impression



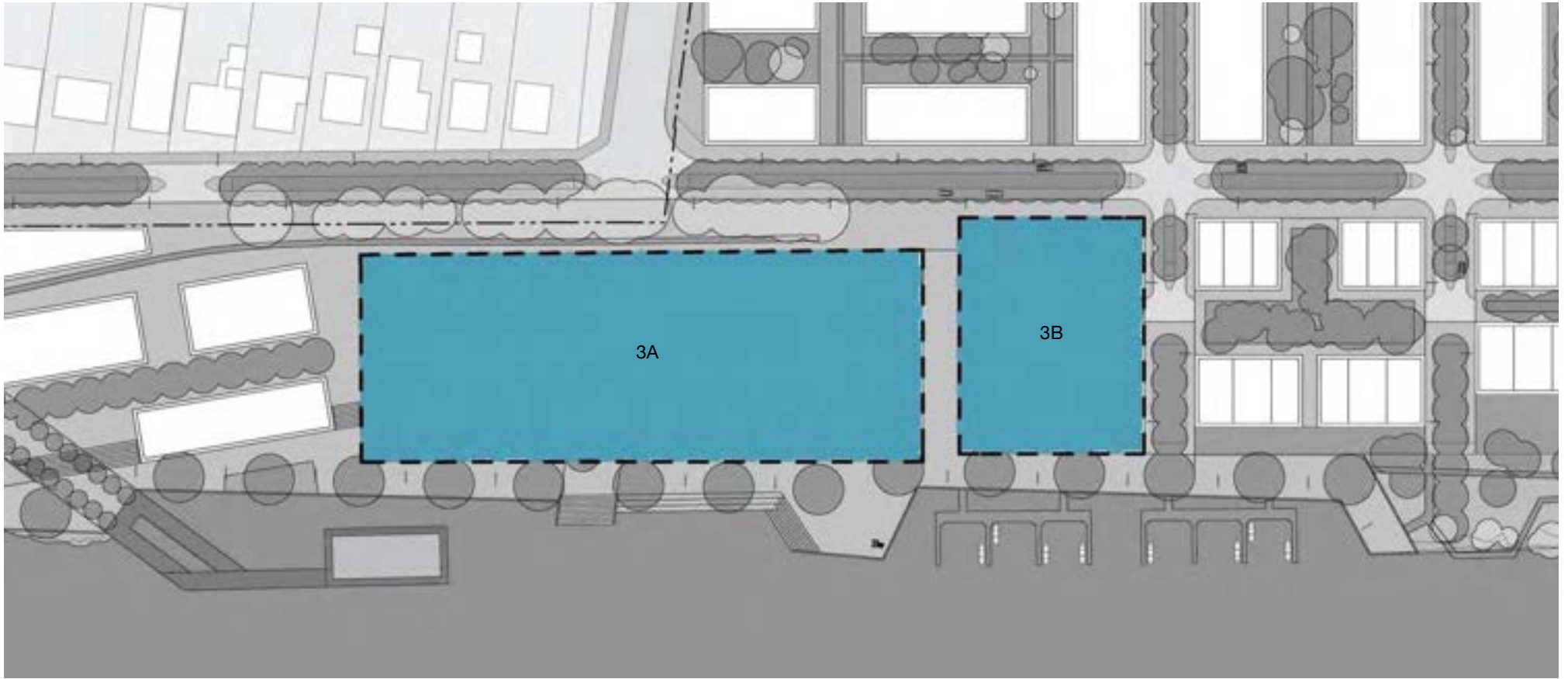
07.4 The Dairy Heritage Precinct

The Dairy Heritage Precinct is a heritage enclave with a mixture of new and existing buildings and in particular refurbishment of the unique heritage buildings with an appropriate adaptive reuse function to activate sheds and public open spaces. Primary uses of this area could include multipurpose cultural and educational facilities, taverns, restaurants, fish co-op, fresh produce markets, community facilities, museum and potential hotel and conference facilities. The variation of external spaces and landscaping strategies will generate an active precinct. The public pontoon and pool / stage is the major public domain feature. An extension of the pedestrian walk and a great place to enjoy a riverside swim or performance. Bulk and scale of built form does not exceed the existing heritage building fabric.





- Adaptive reuse of the unique heritage buildings using potential gaps in the Taree infrastructure such as: art, family market, organic market, local farmers market, high quality and speciality restaurants, hotel/motel, business incubation, reception facilities, function space and child care.
- The interaction with the water will be enhanced through the construction of viewing platforms, floating jetties, floating river pool/ stage and river stairs.
- Open up the buildings towards the river and the public open spaces to encourage people to interact, meet and relax in the heritage precinct.



Development Lots

R = Roof and loft space

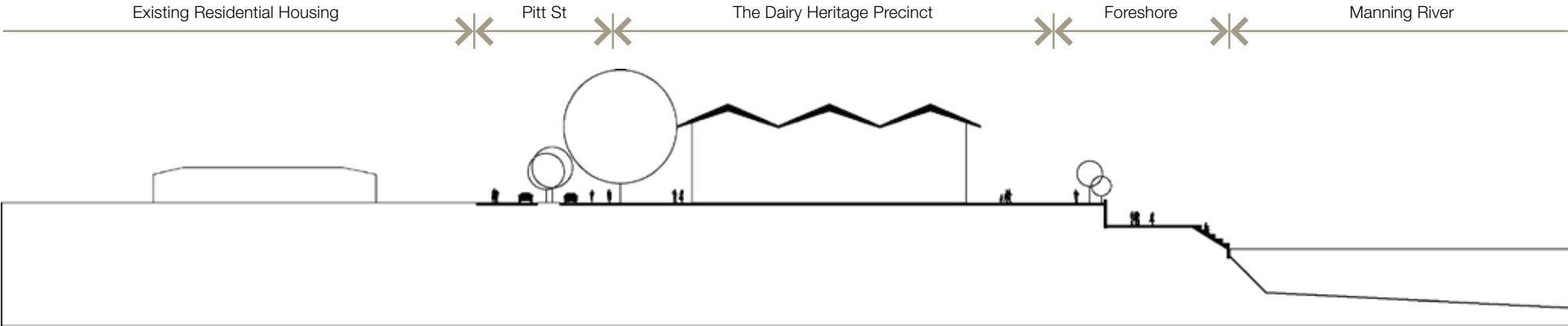
Lot	Area (m²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
3A	9 100	0.75:1	2 Storeys	6.6 + R / 8.5 + R	Commercial / Adaptive Reuse	No setbacks from boundary	Residential Medium-Low Density / Commercial
3B	3 360	2.0:1	3 Storeys	11 + R	Mixed Use	No setbacks from boundary	Commercial



Suggested Building Envelope

Key

- Residential - Low Density
- Residential - Medium-Low Density
- Residential - Medium-High Density
- Mixed Use
- Commercial
- Heritage Adaptive Reuse







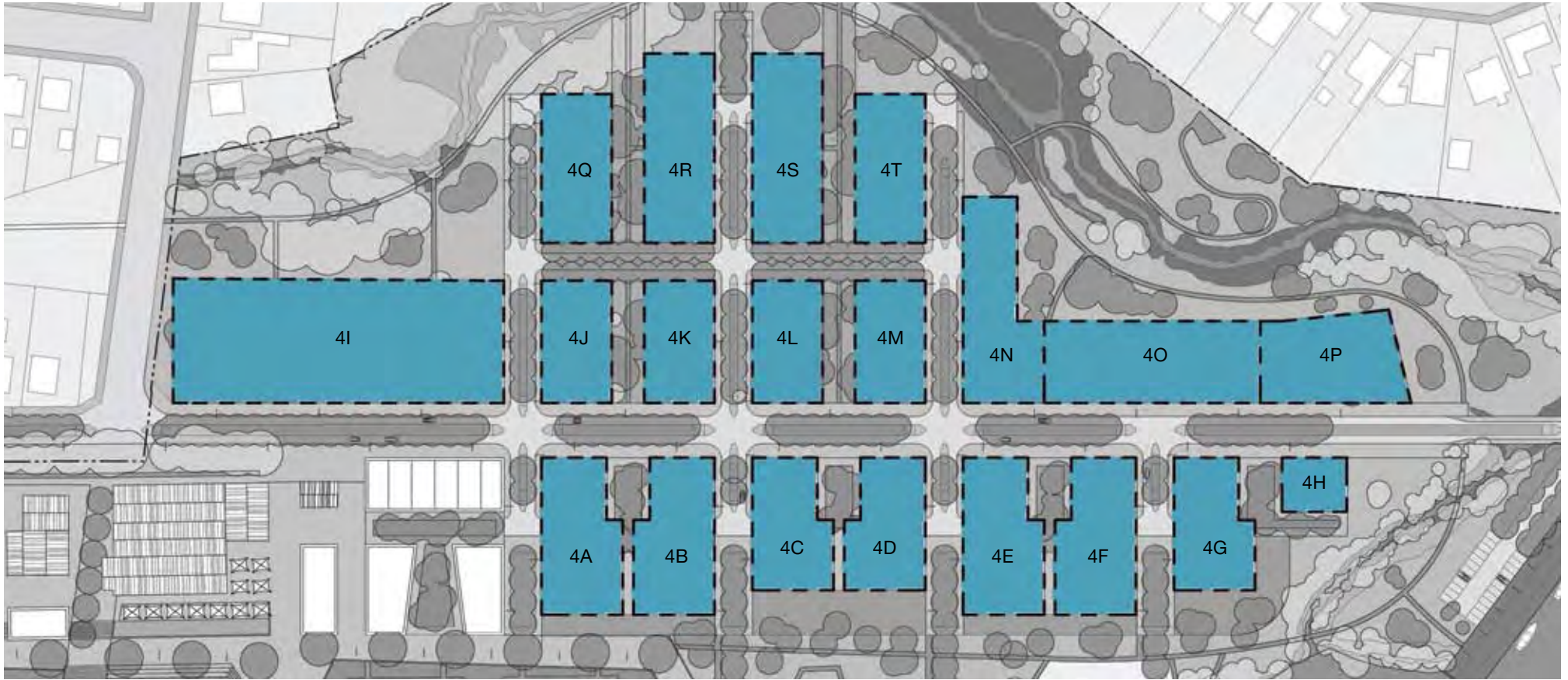
07.5 Riverpark Village Precinct

The Riverpark Village Precinct is a residential village which proposes an assorted number of dwellings, with a mixture of residential types including medium density, integrated housing and apartments. The concept framework for the residential area is proposed as a flexible approach to allow for a range of residential development types including some mixed use and home based business. Nestled between the existing creek, vegetation and riverside, the structure allows building frontage to enjoy a landscaped aspect with a variety of panoramic and glimpse views of the river. Lookout nodes are connected to a boardwalk between existing riverside vegetation. The built form is predominantly two to three storeys with some loft spaces towards the northern fringe to take advantage of the fantastic views.





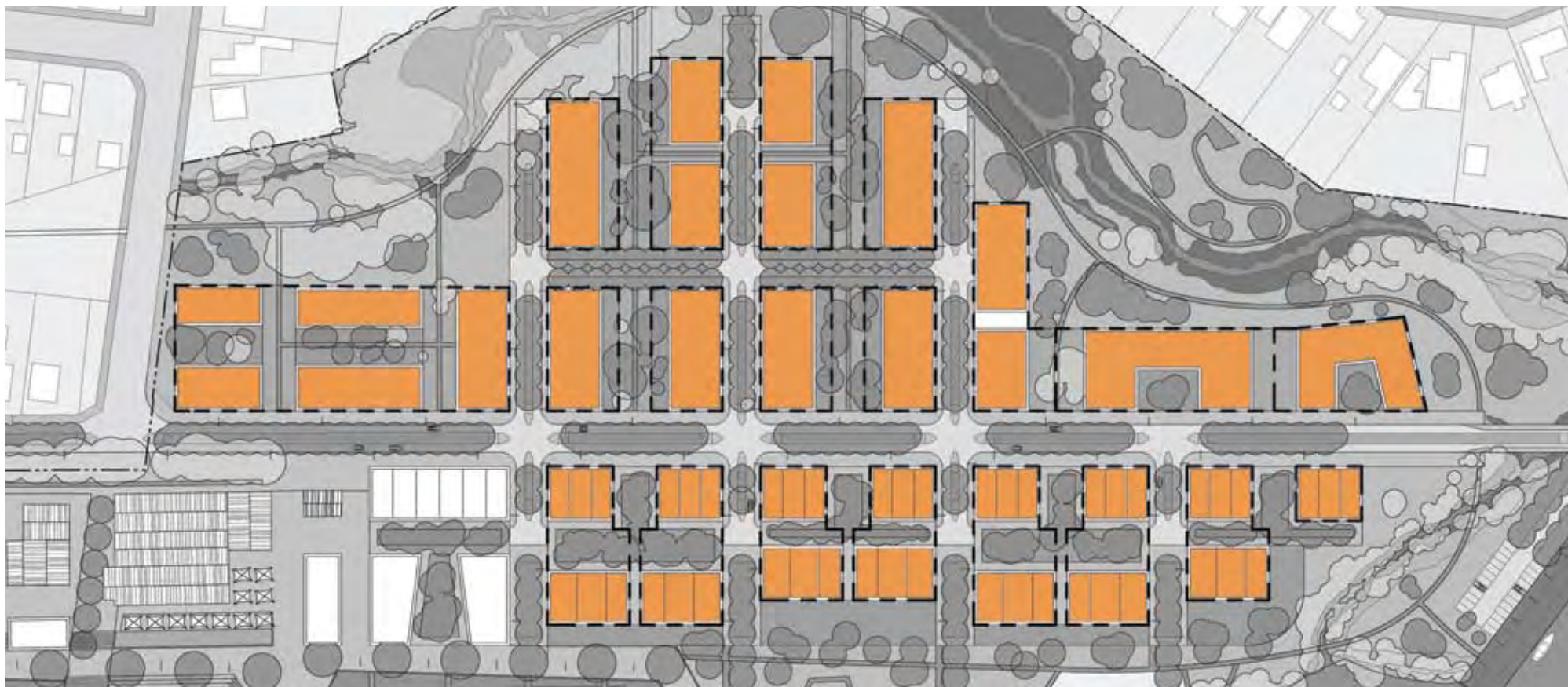
- The residential village, located in between the scenic existing landscape elements, creek & river, is a place where people want to live.
- The use of locally endemic vegetation will enhance the natural environment.
- Water sensitive urban design will reinforce the sensitive and sustainable ecology of the site.
- A public beach at the river's edge provides a place for recreation and social use.
- Raised boardwalks and bridges along the river and creek will connect the Heritage Precinct with the Riverpark Village Precinct and the Marina Commercial Precinct.
- The Wetland Park provides a recreation space for the community. A boardwalk and path system is designed to enjoy different landscape elements such as water, wetland, trees and open grassland. Viewing points are located on natural peaks in the existing topography to overlook the park. Connections to Pioneer Street and Chatham Avenue will be created.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
4A / 4E	1 600	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4B / 4F	1 600	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4C / 4G	1 330	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4D	1 330	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4H	480	3.0:1	3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4I	5 550	2.0:1	3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low Density
4J / 4K	1 170	2.0:1	3 Storeys	10 + R	Residential	6m from Eastern Boundary	Residential - Medium-Low Density
4L / 4M	1 170	2.0:1	3 Storeys	10 + R	Residential	6m from Western Boundary	Residential - Medium-Low Density



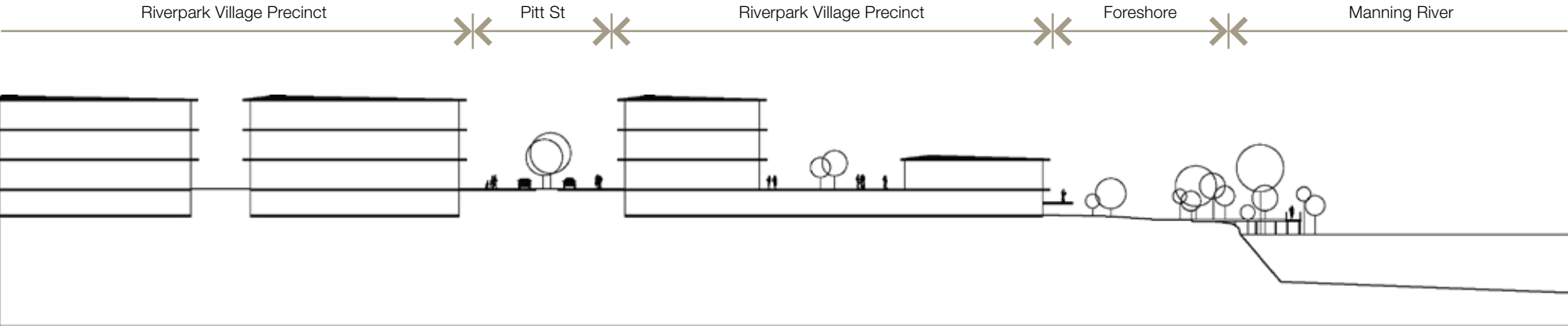
Suggested Building Envelope

Development Lots cont.

Lot	Area (m²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
4N	1 820	2.0:1	3 Storeys	10 + R	Residential	10m from Eastern Boundary	Residential - Medium-Low Density
4O	2 400	2.0:1	3 Storeys	10 + R	Residential	10m / 8m from Western / Eastern Boundary	Residential - Medium-Low Density
4P	1 650	2.0:1	3 Storeys	10 + R	Residential	8m from Western Boundary	Residential - Medium-Low Density
4Q	1 430	3.0:1	4 Storeys	13.2 + R	Residential	6m from Eastern Boundary	Residential - Medium-High Density
4R	1 820	3.5:1	5 Storeys	17.5 + R	Residential	6m from Western Boundary	Residential - Medium-High Density
4S	1 820	3.5:1	5 Storeys	17.5 + R	Residential	6m from Eastern Boundary	Residential - Medium-High Density
4T	1 430	3.0:1	4 Storeys	13.2 + R	Residential	6m from Western Boundary	Residential - Medium-High Density

Key

- Residential - Low Density
- Residential - Medium-Low Density
- Residential - Medium-High Density
- Mixed Use
- Commercial
- Heritage Adaptive Reuse





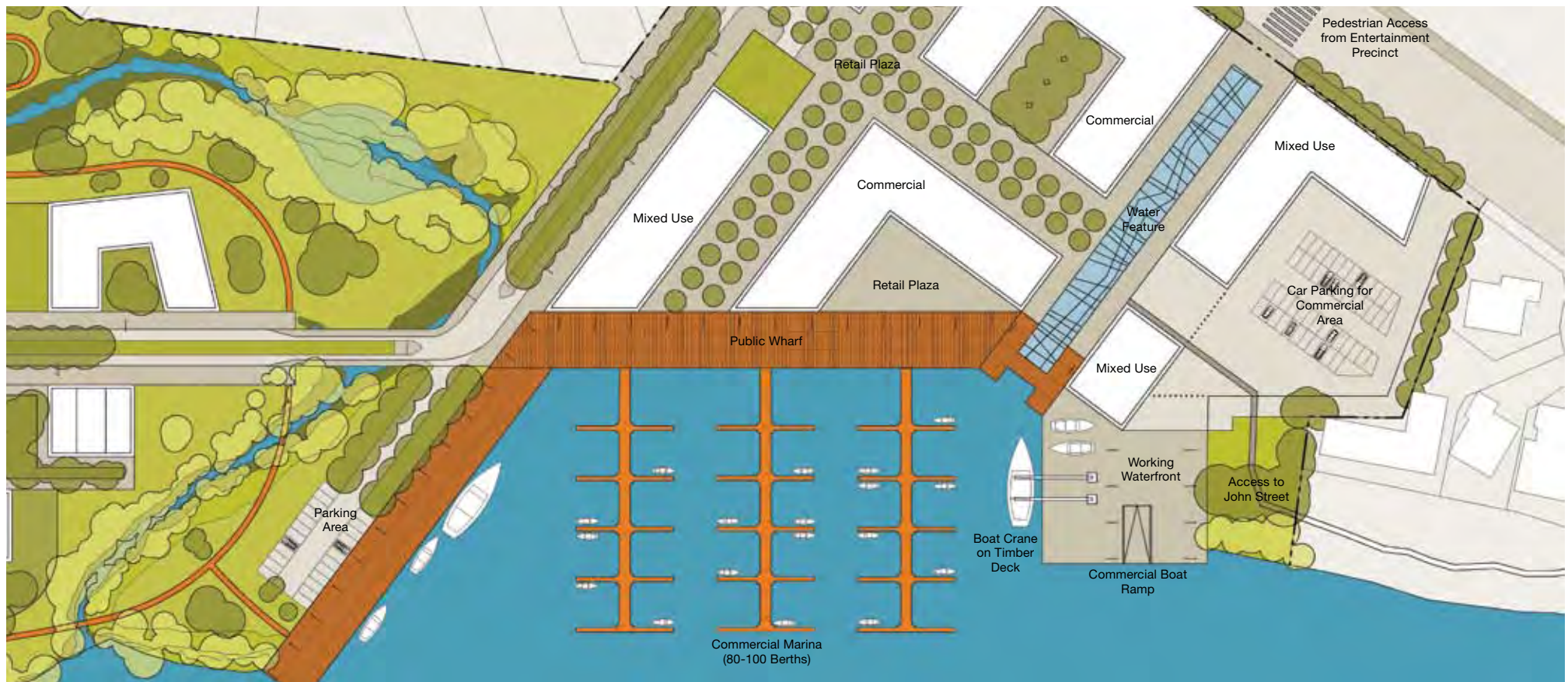
FIGTREES ON THE MANNING
LOCAL AREA PLAN / MASTERPLAN



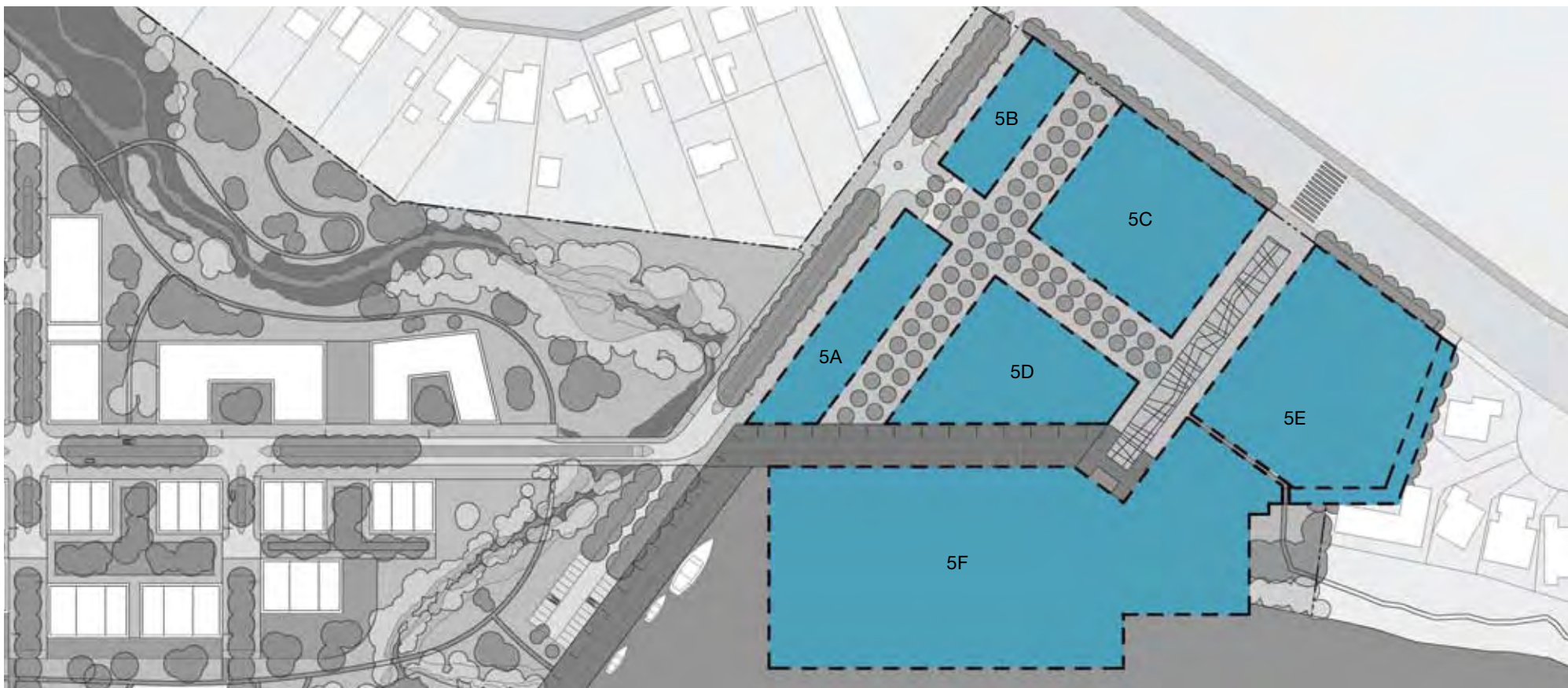
07.6 Marina Commercial Precinct

The Marina Commercial Precinct is a commercial/mixed use centre with a dual frontage to the main road, it forms the eastern gateway to Taree and to the marina and Manning River. Cutting into the riverside to create a protected marina environment provides a significant commercial opportunity. A built form of up to four storeys would be encouraged in the commercial centre with the potential for an iconic gateway landmark. Public access through the site to the Entertainment / Sports and Recreation Precinct to the north and along the Manning River to the east will be included.





- Working waterfront is the character of the marina. It is a commercial and recreational precinct.
- Establish first in existing buildings and later in new buildings a range of uses such as administration for sailing/yachts/house boats/ fishing and whale watching tours, fitness club, cycling centre yoga/ health and lifestyle centre.
- Establish a marina with facilities such as: landing stage, maintenance areas, dry dock, dry storage and boat building facility on the big oyster site.
- A water feature from the east provides the gateway to the site and guides pedestrians from Chatham Avenue to the marina and the Manning River.
- Access around the commercial marina site ensures continuity of public access along the waterfront.



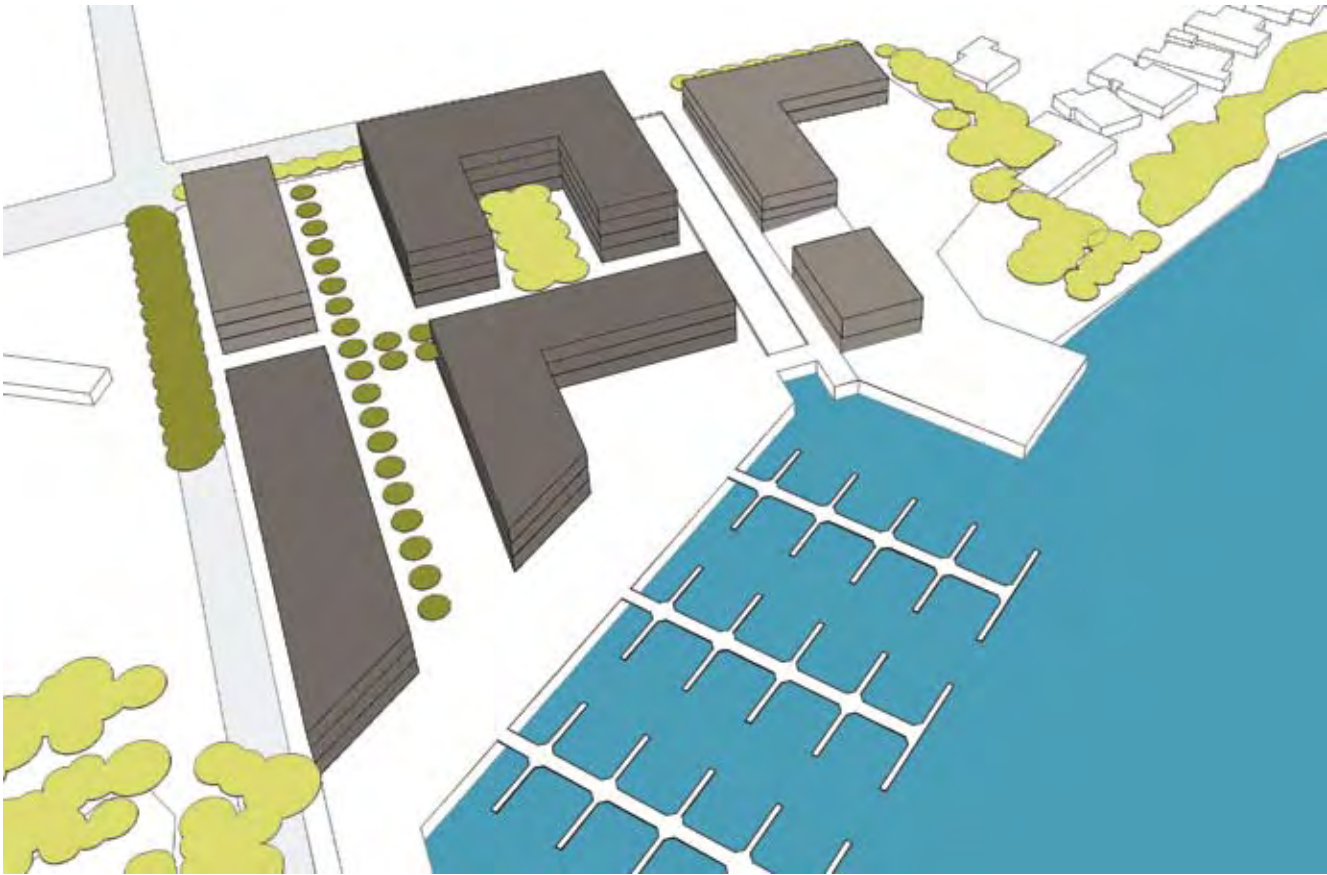
Development Lots

R = Roof and loft space

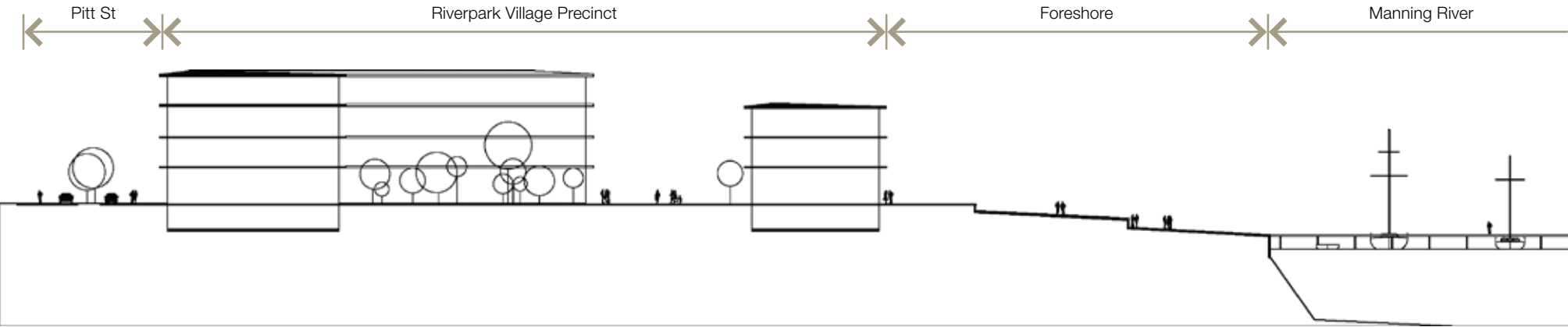
Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
5A	1 480	3.0:1	3 Storeys	12 + R	Commercial	No setbacks from boundary	Mixed Use
5B	1 210	3.0:1	3 Storeys	12 + R	Mixed Use	No setbacks from boundary	Mixed Use
5C	3 800	3.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Commercial
5D	2 800	3.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Commercial
5E	7 380	1.0:1	2 Storeys	12 + R	Mixed Use	No setbacks from boundary	Mixed Use
5F	-	-	-	-	Commercial Marina	No setbacks from boundary	-



Suggested Building Envelope



- Key
- Residential - Low Density
 - Residential - Medium-Low Density
 - Residential - Medium-High Density
 - Mixed Use
 - Commercial
 - Heritage Adaptive Reuse





08. PERFORMANCE MEASURES

08.1 Development Controls

08.1.1 Existing Controls

Development is regulated by multiple layers of planning controls but not all controls apply to all developments. Council must assess proposals against all relevant planning controls.

Each development proposal will have its own regulatory niche. Planning controls undergo regular revision and updating so attempting to specify applicable controls in advance can be misleading. The advice of Council should be sought for each individual Figtrees on the Manning development proposal prior to commencing design.

Broadly the regulatory context is as set out below. Each level can contain relevant controls.

- Commonwealth legislation
- Ministerial directions
- NSW Environmental Planning and Assessment Act 1979 and regulations
- State Environmental Planning Policies
- Regional Strategies
- Regional Environmental Plans (although these may soon be redundant)
- Local Environmental Plan
- Development Control Plan (DCP)
- Developer Contributions plans
- Local policies such as master plans and area plans

This section of the document sets out Council's expectations for individual developments within the Figtrees area. It will also be necessary to comply with all the other relevant controls applying at the time.

Any variations to the DCP controls referred to in this document will need to be in accordance with the procedures and information requirements of the DCP. Any variations will need to be justified as part of a Development Application (DA) submission. Any conflicts between the Masterplan and Council's DCP requirements should be resolved in favour of the Masterplan.

08.1.2 Compliance with the Masterplan

Council has adopted the Suters Architects and s_Lab Masterplan for the Figtrees on the Manning area. Development applications will need to comply with the requirements of the Masterplan. Council will consider variations to the Masterplan provisions but only if justified by an appropriate study.

The Figtrees on the Manning will be developed under the design principles and standards established by the Masterplan.

Design Panel Process

- Panel of experts to be formed to review development proposals.
- The panel will review plans and advise Council on quality of proposed designs.
- A registered architect must be appointed by an applicant to carry out designs in order to lodge a Development Application within the Figtrees on the Manning precinct for the construction or alteration of any building.

Urban Design

Each development proposal will need to address the urban design principles set out in Section 05 of the Masterplan.

- Visual Connections
- Preserving + Integrating Public Buildings + Spaces
- Natural Domain
- Defining Main Street + Gateways + Pedestrian / Cycleways
- Defining Public Spaces
- Traffic

Land Use

Each development proposal will need to comply with the land use requirements set out in Section 06 of the Masterplan.

- Land Uses as specified
 - Plaza + Paving
 - Landscape
 - Boardwalk
 - Existing Trees + Vegetation
 - Proposed Trees + Vegetation
 - Road Network
 - Basement + On Road Car Parking

Character Precinct Controls

Each development proposal will need to comply with the land use requirements set out in Section 07 of the Masterplan.

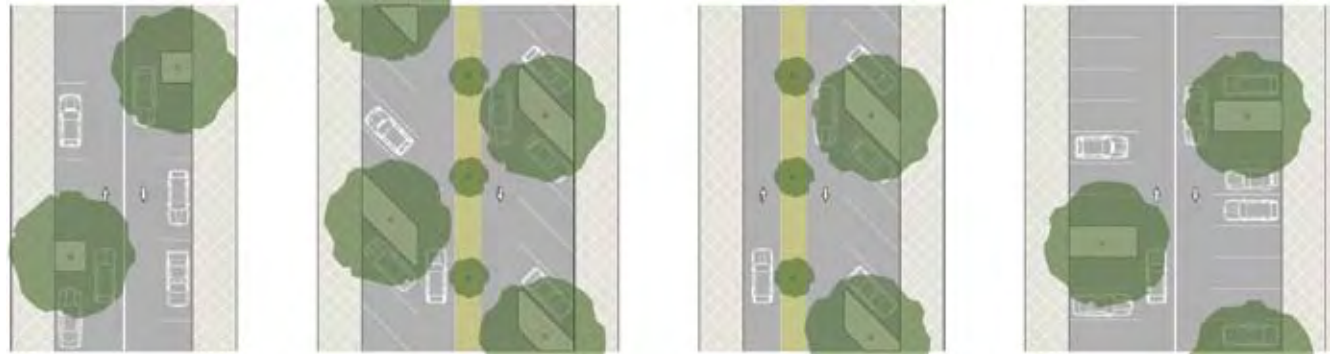
Building envelopes are to be justified through site and design analysis.

- Precinct Objectives
- Lot Controls
 - FSR
 - Height Storeys
 - Height from Natural Ground Level
 - Permissible Uses
 - Setbacks
 - Density / Form
- Suggested Building Envelopes

08.02 Car Parking

Adequate off-street car parking is to be provided in accordance with Part G of the Draft Greater Taree Development Control Plan 2008. The Masterplan provides for underground parking areas to be provided within the proposed building envelopes.

Traffic generation assessments have been undertaken by Connell Wagner as part of the Masterplan process which form the basis for certain intersection treatments and access arrangements to service the proposed future development under the Masterplan. These traffic assessments should be taken into consideration at the time of individual development to determine traffic generation is consistent with the traffic assessments.



Pitt Street Upgrade

A unique opportunity exists to upgrade Pitt Street to provide a pedestrian friendly tree lined boulevard which minimises vehicle traffic but promotes connectivity and interaction with the community. A number of pedestrian islands and traffic calming devices are to

be installed to manage traffic flow and ensure a pedestrian friendly environment is actively promoted during development of the site ensuring connection between character areas and the surrounding community.

Traffic Generation Assessment

Precinct	Classification	Area	Dwellings / Rooms	Assumed Daily Rate	Traffic Generated	Assumed Peak Rate	Base Peak	Site Discount	Discounted Peak	Week Day AM		Week Day PM		Saturday Morning		Sunday Afternoon		
										Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing	
Gateway Residential Precinct	HD Residential	12435	104	4 / dwelling	415	0.7	73	20%	58	10	30	30	10	5	15	15	5	
Gateway Residential Precinct	Mixed Use	2460		4 / 100m2	98	0.8 / 100m2	20	20%	16	12	4	4	12	20	9	9	20	
Figtree Commercial Precinct	Mixed Use	8323		4 / 100m2	333	0.8 / 100m2	67	20%	53	34	10	10	34	60	27	27	60	
Figtree Commercial Precinct	Commercial	17418		8 / 100m2	697	2 / 100m2	139	40%	84	120	50	50	120	60	24	24	60	
The Dairy Heritage Precinct	Residential / Adaptive Re-use	5460	30	4 / dwelling	218	0.3	9	0%	9	5	0	0	5	20	5	5	20	
The Dairy Heritage Precinct	Commercial	5712		8 / 100m2	228	2 / 100m2	46	0%	46	10	0	0	10	42	15	15	42	
Riverpark Residential Precinct	MD Residential	15105	84	4 / dwelling	336	0.3	25	20%	20	2	6	6	2	1	3	3	1	
Riverpark Residential Precinct	HD Residential	32800	273	4 / dwelling	1093	0.7	191	20%	153	29	90	90	29	15	45	45	15	
Riverpark Residential Precinct	HD Residential	21320	118	4 / dwelling	474	0.7	83	20%	66	8	30	30	8	4	15	15	4	
Marina Commercial Precinct	Mixed Use	14712		4 / 100m2	588	0.8 / 100m2	118	40%	71	300	66	66	300	150	30	30	150	
Marina Commercial Precinct	Commercial	19900		8 / 100m2	1592	2 / 100m2	159	0%	159	10	6	6	10	46	20	20	46	
					Base Daily Generation	6073		929		735	540	292	292	540	423	208	208	423
					Discounted Daily Generation	5009												
Assumptions								Directional Split										
	HD Units / Apartments	120 m2 each						Taree CBD / Taree West		65%	351	190	190	351	275	135	135	275
								Taree North		25%	135	73	73	135	106	52	52	106
	MD Dwellings / Townhouses	180 m2 each						Chatham / Cundletown		10%	54	29	29	54	42	21	21	42
										540	292	292	540	423	208	208	423	
								Intersection 1										
									Left Out / Right in		132	122	122	132				
									Right out / Left In		40	40	40	40				
								Intersection 2										
									Left Out / Right in		42	32	32	42				
								Right out / Left In		4	22	22	4					
							Intersection 3											
								Left Out / Right in		279	65	65	279	176	45	45	176	
								Right out / Left In		31	7	7	31	20	5	5	20	
										528	288	288	528	196	50	50	196	



- INTERSECTION VALLEY ST / LYNHURST ST**
- NEW TRAFFIC CONTROL SIGNALS
 - RATIONALISE / CLOSE NELSON ST, RETAIN AS LEFT OUT ONLY
 - PROVIDE RIGHT TURN BAY, DEDICATED PHASE TO LYNHURST STREET



- INTERSECTION CHATHAM AVE / PIONEER ST**
- MODIFY EXISTING TRAFFIC CONTROL SIGNALS
 - EXTEND RIGHT TURN BAY TO PIONEER ST



- INTERSECTION CHATHAM AVE / BLIGH ST**
- NEW TRAFFIC CONTROL SIGNALS
 - EXTEND RIGHT TURN BAY TO BLIGH STREET
 - POSSIBLE IMPACT ON RIGHT TURN BAY TO COWPER ST



LEGEND

— MAJOR TURNING MOVEMENTS

— MINOR TURNING MOVEMENTS

TRAFFIC VOLUME AND GENERATION NOTES

- PREVIOUS DAILY TRAFFIC ON OLD PACIFIC HIGHWAY ESTIMATED 25000 VPD IN 1998, PRIOR TO OPENING OF TAREE BYPASS
- ESTIMATED DAILY TRAFFIC VOLUMES ON OLD PACIFIC HIGHWAY IS CURRENTLY 10500 VPD
- TOTAL ESTIMATED DAILY TRAFFIC GENERATION IS UP TO 9000 VPD
- APPLICATION OF SITE DISCOUNTS REDUCE DAILY GENERATION TO 6000 VPD
- DAILY PEAK GENERATION UP TO 900 VEHICLES PER HOUR
- PROPOSE TO MODIFY EXISTING INTERSECTIONS AS SHOWN

Civil Traffic Generation Plan

08.3 Landscaping

Part G2 of the Draft Greater Taree Development Control Plan 2008 provides landscaping requirements for development sites including the provision for a landscaping plan to be submitted as part of any development application.

The landscape design provided for the site by McGregor Partners encompasses expression of remnant cultural heritage of the site through retention of most existing trees, reuse of heritage buildings and refurbishment of the precinct into a series of spaces guided by the existing and future built context. The design has embraced 'urban ecology' principles where the site design components are integral to the social, environmental and ecological systems.

The Masterplan provides for a diverse range of landscaping treatment in the public and private spaces as provided by the landscape plan.

Master Plant List

Trees 25 L [min.] 400L [max.]

Acacia maidenii - Maidens Wattle [5-6m]
Acmena smithii - Lill-pilly [5-10m]
Allocasuarina littoralis - Black She-oak [5-10m]
Allocasuarina torulosa - Forest She-oak [5-7m]
Angophora costata - Smooth-barked Apple [10-15m]
Angophora floribunda - Rough-barked Apple [10-15m]
Banksia aemula - Saw Banksia [4-6m]
Banksia ericifolia - Heath Banksia [4-6m]
Banksia integrifolia - Coastal Banksia [6-10m]
Brachychiton acerifolius - Flame Tree [6-10m]
Casuarina glauca - Swamp Oak [6-10m]
Ceratopetalum gummiferum - NSW Christmas Bush [4-7m]
Corymbia gummifera - Red Bloodwood [8-15m]
Corymbia maculata - Spotted Gum [8-15m]
Cupaniopsis anacardioides - Tuckeroo [5-12m]
Eucalyptus globoidea - White Stringybark [15-20m]
Eucalyptus microcorys - Tallowwood [10-20m]
Eucalyptus pilularis - Blackbutt [15-20m]
Eucalyptus robusta - Swamp Mahogany [10-15m]
Elaeocarpus reticulatus - Blueberry Ash [5-10m]
Eucalyptus saligna - Sydney Bluegum [15-20m]
Eucalyptus signata - Scribbly Gum [15-20m]
Ficus coronata - Creek Sandpaper Fig [4-6m]
Ficus macrophylla - Moreton Bay Fig [15-20m]
Ficus obliqua - Small-leaved Fig [15-20m]
Hakea salicifolia - Willow-leaf Hakea [4-6m]
Hymenosporum flavum - Native Frangipani [5-8m]
Melaleuca armillaris - Bracelet Honey-myrtle [6-8m]

Where planting areas are located above parking areas or on structures a minimum of 800mm soil depth is to be provided for tree planting and 500mm for shrub/ground cover planting.

According to the 'Ecological Constraints Assessment' (prepared by: Ecotone Ecological Consultants, August 2007), the site only contains relatively minor remnants of natural vegetation, mainly in the form of discontinuous patches of narrow bands or riparian vegetation along the riverbank and creek. The bulk of the site is open and consists of cleared pasture. Large areas of the remnant vegetation are degraded and invaded by noxious and environmental weeds to varying degrees, from minor invasions in edge zones to almost complete replacement by exotic species.

Melaleuca ericifolia - Swamp Paperbark [4-6m]
Melaleuca linariifolia - Snow-in-summer [6-10m]
Melaleuca nadosa - Ball Honey-myrtle [4-6m]
Melaleuca quinquenervia - Broad-leaf Paperbark [6-12m]
Melia azederach - White Cedar [6-10m]
Syzygium paniculatum - Magenta Lilly Pilly [7-12m]

Native Ferns

Blechnum cartilagineum - Gristle Fern [80cm]
Doodia aspera - Prickly Rasp Fern [50cm]

Native Shrubs [min. 150mm containers]

Acacia falcata - Sickle Wattle [3-4m]
Acacia floribunda - Whie Sallow Wattle [4-6m]
Acacia implexa - Lightwood Wattle [4-6m]
Acacia irrorata - Green Wattle [4-6m]
Acacia longifolia - Sydney Golden Wattle [2-4m]
Acacia obtusifolia - Blunt-leaf Wattle [2-4m]
Acacia mearnsii - Black Wattle [3-10m]
Banksia marginata - Silver Banksia [4-6m]
Banksia oblongifolia - Swamp Banksia [2-3m]
Banksia pululosa - Swamp Banksia [2-3m]
Banksia robur - large-leaf Banksia [2-3m]
Banksia spinulosa - Hairpin Banksia [4-16m]
Busaria spinosa - Sweet Bursaria [2-4m]
Callistemon linearis - Narrow-leaf Bottlebrush [2-3m]
Ceratopetalum gummiferum - NSW Christmas Bush [2-4]
Correa reflexa - Common Correa [1-2m]
Crowea exalata - Crowea [1.5m]
Dadonaea viscosa - Narrow-leaf Hopbush [3-5m]
Elaeocarpus reticulatus - Blueberry Ash [3-5m]

The master plant list is derived of native and locally endemic plant species of Greater Taree, to enhance biodiversity. Appropriate species will be chosen from this list according to final site conditions, availability and detailed design considerations.

For a full reference refer to McGregor + Partners 'Landscape Architecture Report for Local Area Plan'.

Hakea dacyloides - Heathland Hakea [1-1m]
Hakea teretifolia - Dagger Hakea [2-3m]
Kunzea ambigua - White Kunzea [2-3m]
Myoporum acuminatum - Mangrove Boobialla [3-4m]
Prostanthera incisa - Cut-leaf Mint Bush [2-3m]
Westringia fruticosa - Coastal Rosemary [2m]

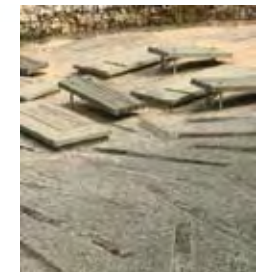
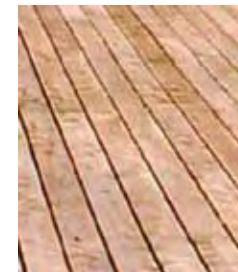
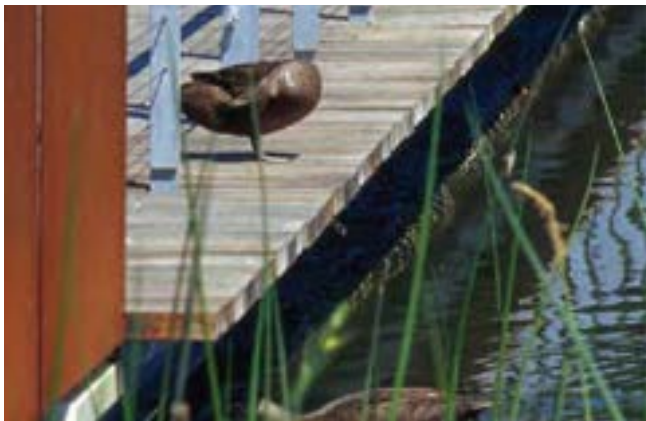
Native Ground Covers/Climbers/Grasses [min. 150mm containers]

Clematis aristata - Clematis
Dianella caerulea - Paroo Lily
Dianella longifolia - Blue Flax Lilly [1m]
Hardenbergia violacea - False Sardaparilla [10cm]
Hibbertia scandens - Snake Vine
Eustrephus latifolius - Wombat Berry
Isolepsis nodosa - Knobbly Club-rush
Lomandra longifolia - Spiny Mat Rush [1m]
Lomandra hystrix - Tall Mat Rush [80cm]
Pandorea pandorana - Wonga Wonga Vine
Poa labillardieri - Large Tussock-grass
Viola hederacea - Native Violet [10cm]

Native Wetland Plants/Sedges [min. 150mm containers]

Carex apressa - Tall Sedge [8m]
Carex fascicularis - Tassell Sedge [1m]
Isolepsis inundata - Swamp Club rush
Juncus usitatus - Common rush [0.5m]
Juncus pallidus - [1.25m]
Juncus articulatus - Jointed Rush [0.6m]
Juncus pallidus - Pale Rush [1m]
Gahnia sieberiana - Sedge [1.5m]





08.4 Floodplain Management

Low lying parts of the site are subject to flooding as identified by the site analysis undertaken as part of the Masterplan process. Development of flood prone land is to comply with Part E of the Draft Greater Taree Development Control Plan 2008.

08.5 Subdivision

The Masterplan provides for a number of development lots within each precinct having regard for the proposed road layout plan. Subdivision is to be consistent with the Masterplan and comply with Part C of the Draft Greater Taree Development Control Plan 2008.

08.6 Heritage

Part F of the Draft Greater Taree Development Control Plan 2008 provides development guidelines for heritage items which should be complied with. A Heritage Impact Statement is required to be considered as part of any development application for works with the potential to affect heritage items and should have regard to The Aboriginal and Historical Heritage Assessment – Pitt Street Waterfront Development, Chatham, Taree (HLA-Envirosceinces September 2007). This assessment identified two heritage items within the area:

- The Manning River Co-operative Dairy Society (ex Dairy Farmers) Factory; and
- The Lime kilns tramway and wharf

In addition the report further identified a number of potential archaeological heritage items of local significance including; railway siding, fuel depots, large shed, readymix, produce store, fishermans cooperative, area of archaeological potential along the Manning River bank, Pitt Street, housing along Pitt Street, farm remains and the Big Oyster. In addition the railway cutting site is a locally rare example of a river side Aboriginal stone artefact site

One of the key design principles for the Masterplan is to protect, retain and reuse as many of the heritage sites as possible. The Masterplan provides for the conservation of number of local heritage buildings within the 'Dairy Heritage Precinct'. The sensitive adaptive re-use of these buildings is an important element to the future development of the area and provides an opportunity to link the site to its past use and create a community focal point.

08.7 Stormwater Management

Stormwater management for the site is to comply with Part C3.5 of the Draft Greater Taree Development Control Plan 2008.

A stormwater strategy has been prepared by Connell Wagner & McGregor Partners as part of the Masterplan design process incorporating water sensitive urban design principles for both public and private space. Stormwater from the site is to be managed to protect natural systems and reflect predevelopment flows in terms of water quality and quantity. The Masterplan makes provision for stormwater design to be intrinsically linked to the natural and proposed landscape features of the site including:

- Stormwater from roads and paved surfaces flows to biotopes/ bioswales where it is filtered under low flow conditions before being released into natural systems.
- Overflow from the road bioswales will be directed into biofiltration biotapes located in the public open space before entering the creek or river.
- Clean roof water from buildings is stored for reuse, including irrigation of public space and private spaces.





08.8 Sustainability

ARUP Sustainability has completed a sustainability action plan for the future development proposed under the Figtrees on Manning Masterplan. This plan has been guided by the NSW Government policy on sustainability (BASIX and the draft Mid North Coast Regional Strategy). The sustainability action plan identifies a range of sustainability measures for the future development of the site across four key performance measures:

- Environment
- Natural Resources
- Societal
- Economic

In order to meet the sustainability commitments to achieve a very high standard in regards to sustainability the performance measures identified by the ARUP sustainability action plan must be addressed at a Development Application stage.

The following is a summary of the sustainability performance measures of the Masterplan. For a full reference refer to ARUP Sustainability's 'Figtrees on the Manning Sustainability Report for Local Area Plan / Masterplan - June 2008'.

Environment

- Ecology: Remediation of creek and adjoining space with 100% native species. Significant increase of vegetation cover against existing condition. Bioswales, creek line and detention pond improve and create new aquatic habitat. Requirement in the DCP for a comprehensive Landscape and Environment Strategy to be developed for the site.
- Water Quality: Bioswales, detention pond and remediated creek to filter stormwater prior to release to Manning River. Requirement in the DCP for a comprehensive Water Strategy to be developed for the site. The Water Strategy to address both water quality and water reduction requirements.
- Management: Regulatory compliance to be exceeded. Best practice sustainability outcomes to be the goal.
- Site: Connections with the surrounding community implemented. Inclusion of a pedestrian and cycle link through the site and linking the CBD.

Natural Resources

- Land Use: No requirement for fill to leave the site (except for Marina excavation). No contaminated land known to be present.
- Energy Reduction: Solar energy is preferred renewable energy source. Use of solar powered street lighting, solar hot water and PV panels. DCP to include energy efficiency standards (e.g. Green Star). Requirement in the DCP for a comprehensive Energy and Carbon Strategy to be developed for the site.
- Materials: DCP to include materials specification. Local materials and local labour to be maximised. Heritage materials to be reused onsite (e.g. rail line).
- Waste: Green and organic waste to be collected as feedstock for composting and community garden. Recycling bins provided in public areas. Construction waste recycling target of 60% by mass. Requirement in the DCP for a comprehensive Waste Strategy to be developed for the site.
- Water Reduction: Greywater recycling onsite. Rainwater to be captured, stored and used for irrigation and other non-potable purposes. AAA water efficient fittings to be specified. Requirement in the DCP for a comprehensive Water Plan to be developed for the site. The Water Plan to address both water quality and water reduction requirements.

Societal

- Community: Design incorporates significant open space areas, public space, entertainment and recreational opportunities. A community garden is proposed. Opportunities for public art to be investigated. Requirement in the DCP for a comprehensive Healthy Community Strategy to be developed for the site.
- Transport: Major cycleway and walkway along the riverfront. New road network, to be kept low speed and designed to minimise through traffic.
- Health and Welfare: Crime prevention through environmental design including passive surveillance by mixed use zones. Local food outlets, low impact traffic, encouragement of walking and cycling.
- Heritage: Significant reuse and adaption of heritage buildings and features.

- Amenity: Provide access to riverbank for entire community. Design guidelines to include minimised fencing use, building orientation to maximise thermal comfort, IEQ requirements (e.g. user controls and natural ventilation).

- Access: Access to the site from many entry points, via road, walkway, cycleway and riverfront. The existing community will be encouraged to use the site.

Economic

- Planning: Site is a mixture of brownfield and greenfield and is effectively infill development. A number of land uses and large areas of open space are proposed.
- Employment: A wide variety of business to be established onsite. Scope for inclusion of commercial office space.
- Viability: Funding security and staging to be determined.
- Innovation: Numerous potential opportunities for Innovation (water supply, energy, built form). Yet to be fully determined.
- Security: Precedence is given to crime prevention through environmental design over systems that require ongoing cost (e.g. security guards).

Manning Riverfront Development Traffic Generation Assessment																	
Precinct	Area	Dwellings / Rooms	Classification	Assumed Daily Rate	Traffic Generated	Assumed Peak Rate	Base Peak	Site Discount	Discounted Peak	Week Day AM		Week Day PM		Saturday Morning		Sunday Afternoon	
										Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing
Chase Residential 1	19860	166	HD Residential	4 / dwelling	662	0.3	50	20%	40	10	30	30	10	5	15	15	5
Chase Mixed Use	13650		Mixed Use	4 / 100m2	546	0.8 / 100m2	109	20%	87	34	10	10	34	60	27	27	60
Chase Commercial	14190		Commercial	10 / 100m2	1419	2 / 100m2	284	40%	170	120	50	50	120	60	25	25	60
Chase Heritage	6310		Heritage	2 / 100m2	126	0.4 / 100m2	25	0%	25	5	0	0	5	20	5	5	20
Chase Hotel and Conference	7550	94	Tourist	4 / unit	378	0.6 / unit	57	0%	57	10	0	0	10	42	15	15	42
Chase Residential 2	4160	35	HD Residential	4 / dwelling	139	0.3	10	20%	8	2	6	6	2	1	3	3	1
Hocana Residential 1	59395	495	HD Residential	4 / dwelling	1980	0.3	148	20%	119	29	90	90	29	15	45	45	15
Hocana Residential 2	12055	67	MD Residential	6 /dwelling	402	0.7	47	20%	38	8	30	30	8	4	15	15	4
Marina 1	38130		Commercial	8 / 100m2	3050	1.6 / 100m2	610	40%	366	300	66	66	300	150	30	30	150
Marina 2	8190		Recreational	4 / 100m2	328	0.8 / 100m2	66	0%	66	10	6	6	10	46	20	20	46
Base Daily Generation					9029		1406		975	528	288	288	528	403	200	200	403
Discounted Daily Generation					6496			Directional Split									
Assumptions								Taree CBD / Taree West	65%	343	187	187	343	262	130	130	262
Hotel Rooms	80 m2 each							Taree North	25%	132	72	72	132	101	50	50	101
HD Units / Apartments	120 m2 each							Chatham / Cundletown	10%	53	29	29	53	40	20	20	40
MD Dwellings / Townhouses	180 m2 each									528	288	288	528	403	200	200	403
Intersection 1																	
										Left Out / Right in	132	122	122	132			
										Right out / Left In	40	40	40	40			
Intersection 2																	
										Left Out / Right in	42	32	32	42			
										Right out / Left In	4	22	22	4			
Intersection 3																	
										Left Out / Right in	279	65	65	279	176	45	45
										Right out / Left In	31	7	7	31	20	5	5
										528	288	288	528	196	50	50	196

Volume on Old Pacific Highway at Browns Creek	1990	1995	1998	2001	2004	2007
	20806	22707	(Estimate) 25000	13722	15095	(Estimate) 16600



Planning & Infrastructure

24 May 2011

Contact: Jane Flanagan
Phone: 9228 6431
Fax: (02) 9228 6455
Email: jane.flanagan@planning.nsw.gov.au

Mr Richard Pamplin
Manager – Environmental & Strategic Planning
Greater Taree City Council
PO Box 482
TAREE NSW 2430

Our ref.: MP08_0039



Dear Mr Pamplin

Subject: Determination of Pitt Street, Chatham, Taree (MP08_0039)

Thank you for your submission on the above project. The project was approved on 3 May 2011.

A copy of the approval is enclosed including copies of the endorsed plans in accordance with the approval for your information.

The approval and the Director-General's assessment report are available on the Department's website (<http://majorprojects.planning.nsw.gov.au/page/>).

Your contact officer for this proposal, Jane Flanagan, can be contacted on 9228 6431 or jane.flanagan@planning.nsw.gov.au. Please mark all correspondence regarding the proposal to Ms Flanagan's attention.

Yours sincerely,

Michael Woodland
Director
Metropolitan and Regional Projects South

Concept Approval


Section 75O of the *Environmental Planning & Assessment Act 1979*

I, the Deputy Director-General, acting under delegation from the Minister for Planning, under the *Environmental Planning and Assessment Act 1979* (the EP&A Act) determine:

- a. Under section 75O of the Act, to approve the concept plan referred to in Schedule 1 subject to the modifications in Schedule 3 and the proponent's Statement of Commitments in Schedule 6;
- b. Under section 75P(1)(a) of the Act, that further environmental assessment be subject to the requirements set out in Schedules 4 and 5; and
- c. Under section 75P(1)(b) of the Act, that approval to carry out the project be subject to Part 4 or 5 of the Act, as relevant.

The modifications and further assessment requirements are required to:

- Encourage the orderly future development of the site; and
- Ensure adequate mitigation of environmental impacts of future development.


Richard Pearson
Deputy Director-General
Development Assessment and Systems Performance

Sydney

3rd May

2011

SCHEDULE 1

Application No.:	MP08_0039
Proponent:	Chase Taree Developments Pty Ltd, Hocana Property Pty Ltd, and Spychalla Pty Ltd
Approval Authority:	Minister for Planning
Land:	Lots 1 and 2 DP804829, Lot 1 DP243828, Lots A and 1 DP343913, Lots 1 and 2 DP555702, Lots 27 to 29 and 31 DP20200, Lots 35 to 36 and 38 to 39 DP24505, Lots 12 and 15 to 16 DP703272, Lots 1 and 2 DP215485, Crown Reserve 037-3070 and Reserve 1011448, Pitt Street, Chatham, Taree.
Project:	<p>Pitt Street, Chatham, Taree mixed use residential, commercial, tourist, open space, and marina development, including:</p> <ul style="list-style-type: none">• Building envelopes (indicating height in storeys);• Floor areas and floor space ratios;• Land uses (residential, commercial, tourist, open space, and marina);• Indicative street alignments and pedestrian networks;• Location of open space, landscaping and "restored" wetland and riparian areas;• Location of 3 marinas with a total 100 berth capacity and 1 jetty for 10 vessels;• Heritage items to be retained and adaptively reused; and• Location of recreational facilities and public domain elements.

TABLE OF CONTENTS

DEFINITIONS	2
SCHEDULE 2	3
ADMINISTRATIVE CONDITIONS	3
TERMS OF APPROVAL	3
SCHEDULE 3	5
MODIFICATIONS TO CONCEPT PLAN	5
MODIFICATION GROUP	5
1. Land to which concept plan relates	5
2. Aboriginal Railway Cutting Site - Gateway Residential Precinct	5
SCHEDULE 4	6
REQUIREMENTS FOR FIRST FUTURE APPLICATION	6
SCHEDULE 5	7
REQUIREMENTS FOR FUTURE APPLICATIONS	7
SCHEDULE 6	14

DEFINITIONS

<i>Act</i>	<i>Environmental Planning and Assessment Act 1979 (NSW).</i>
<i>Advisory Notes</i>	Advisory information relating to the approved development but which does not form part of this approval.
<i>BCA</i>	Building Code of Australia.
<i>Council</i>	Greater Taree City Council.
<i>DECCW</i>	Department of Environment, Climate Change and Water.
<i>Department means the</i>	Department of Planning or its successors.
<i>Director-General</i>	Director-General of the Department or his/her nominee.
<i>Environmental Assessment</i>	Environmental Assessment Report prepared by JBA Urban Planning Consultants Pty Ltd and dated 16 November 2009, including all its Appendices.
<i>Minister</i>	Minister for Planning.
<i>Project</i>	The project as described in Schedule 2, Condition 1 to this approval.
<i>PCA</i>	A Principal Certifying Authority and has the same meaning pursuant to Part 4A of the Act.
<i>Proponent</i>	Chase Taree Developments Pty Ltd, Hocana Property Pty Ltd, and Spychalla Pty Ltd or any party acting upon this approval.
<i>Regulation</i>	<i>Environmental Planning and Assessment Regulation 2000.</i>
<i>Response to Submissions</i>	Response to Submissions prepared by JBA Urban Planning Consultants Pty Ltd and dated 4 June 2010, including Attachments and Table.
<i>Subject Site</i>	Has the same meaning as the land identified in Schedule 1.

**SCHEDULE 2
ADMINISTRATIVE CONDITIONS**

TERMS OF APPROVAL

1. Project description

Concept plan approval is granted only to carrying out the project as generally described in detail below:

- (a) A mixed use residential, commercial, tourist, open space, and marina development comprising the following:
- (i) Indicative 57 building envelopes up to 17.6m in height (including roof and loft space) across 5 precincts;
 - (ii) 84,200m² of residential floor space, 23,970m² of mixed use floor space; 11,410m² of mixed use commercial floor space; and 6,825 m² of commercial adaptive re-use floor space;
 - (iii) Land uses (residential, commercial, tourist, open space, and marina);
 - (iv) Indicative street alignments and pedestrian networks;
 - (v) Location of open space, landscaping and "restored" wetland and riparian areas;
 - (vi) Location 1 jetty for 10 vessels and 3 commercial marinas with a total 100 berth capacity;
 - (vii) Heritage items to be retained and adaptively reused; and
 - (viii) Location of recreational facilities and public domain elements.

The breakwater does not form part of this approval.

2. Project in Accordance with Documents

The project must be undertaken in accordance with the following documents:

Environmental Assessment documentation

- a) *Environmental Assessment Report, Concept Plan: Figtrees on the Manning, Taree*, Volumes 1 to 3, prepared by JBA Urban Planning Consultants Pty Ltd, dated 16 November 2009, including all Appendices.

Response to Submissions documentation

- b) Response to Submissions prepared by JBA Urban Planning Consultants Pty Ltd dated 4 June 2010, including letter, Attachments A – D and Table

except:

- 1) for any modifications which may be necessary for the purpose of compliance with the BCA and any Australian Standards incorporated in the BCA;
- 2) as otherwise provided by the terms of this approval.

3. Inconsistencies

- (1) In the event of any inconsistency between:

- (a) The terms of this approval and the Statement of Commitments (at Schedule 6), the terms of this approval prevail;
- (b) The terms of this approval and the drawings/documents referred to in condition 2 above, the terms of this approval prevail; and

- (c) Any drawing/document listed in condition 2 above, the most recent document shall prevail to the extent of the inconsistency.
- (2) If there is any inconsistency between the terms of the approval of the concept plan and any project approval or development consent, this concept approval shall prevail to the extent of the inconsistency.

4. Lapsing of Approval

Approval of Major Project No. 08_0039 shall lapse 5 years after the date of determination unless works the subject of any related application have been physically commenced, on or before that lapse date. The Director-General may extend this lapse date if the proponent demonstrates to the satisfaction of the Director-General that the project remains current, appropriate and reflective of the best use of the site at the date the approval would otherwise lapse.

**SCHEDULE 3
MODIFICATIONS TO CONCEPT PLAN**

MODIFICATION GROUP

1. Land to which concept plan relates

Excised lots

- (a) Lots 30 and 32 DP20200, Lots 33 and 37 DP24505, Lot 14 DP 703282, and Lots 1 to 4 SP22701 must be excised from the concept plan and excluded from relevant future applications.

2. Aboriginal Railway Cutting Site - Gateway Residential Precinct

Landscape design

- (a) The viewing platform and the pathway adjacent to the Aboriginal Railway Cutting Site must be relocated so as not to impinge on the Aboriginal Heritage site.
- (b) This condition must be read in conjunction with Condition 20 Aboriginal Cultural Heritage, Schedule 5 below.

3. Central road (Riverpark Village Precinct)

Relocate the central road further north at its eastern end or demonstrate that its proposed position is optimal in terms of maximising the conservation and protection of mangroves adjacent to the unnamed tributary through the northern part of the site.

SCHEDULE 4

REQUIREMENTS FOR FIRST FUTURE APPLICATION

Pursuant to sections 75P(1)(a) and 75P(2)(c) of the Act the following requirements apply with respect to the first stage of the project to be assessed under Part 4 or 5, as relevant, of the Act. The requirements must be submitted to the satisfaction of the relevant approval authority with the first application submitted for the site.

1. Contamination investigations:

Undertake further investigation, sampling and analysis, and prepare site audit statements for localised areas of contamination generally in accordance with 'Greater Taree City Council Rezoning of Pitt St Waterfront Chatham – Acid Sulphate Soil and Contamination Assessment and Review', Sinclair Knight Merz (7 Nov 2007) (Appendix G of EA).

Note: The localised areas of contamination include the fishermen's co-operative, dairy factory, fuel depot, vacant area down slope of the depot, and the area behind Sheather's machinery (dairy factory).

2. Acid Sulfate Soil Management

Provide the following details generally in accordance with 'Greater Taree City Council Rezoning of Pitt St Waterfront Chatham – Acid Sulphate Soil and Contamination Assessment and Review', Sinclair Knight Merz (7 Nov 2007) (Appendix G of EA):

- (a) Undertake detailed investigation of acid sulfate soils present on the site to define the extent and concentration of acid sulfate soils prior to preparing an Acid Sulfate Soil Management Plan. The investigation must particularly address low lying areas adjacent to the Manning River, areas requiring deep bulk excavation and appropriate technical measures.
- (b) Prepare an Acid Sulfate Soil Management Plan in accordance with the *ASSMAC Manual*. The Plan must address excavation, particularly for the marina and service trenches.

SCHEDULE 5

REQUIREMENTS FOR FUTURE APPLICATIONS

Pursuant to sections 75P(1)(a) and 75P(2)(c) of the Act the following requirements apply, as relevant, with respect to future stages and precincts of the project to be assessed under Part 4 or 5, as relevant, of the Act. The requirements must be submitted to the satisfaction of the relevant approval authority with relevant applications.

Requirements for Marina Commercial Precinct:

1. Noise

- (a) Submit details of ameliorative measures for the attenuation of noise from the Marina Commercial Precinct, including the boat building facility, boat ramp and car park generally in accordance with the recommendations and noise criteria of the Acoustic Assessment (Acoustic Logic, dated 5 November, 2009 – Appendix T of the EA), and with the requirements of the DECC Industrial Noise Policy, Intrusiveness and Amenity Criteria.
- (b) Submit a plan of management which addresses the hours of use for power tools (high pressure hoses, compressors and hand tools) in the marina/dry dock area.
- (c) Provide detailed acoustic assessment of the proposed boat crane and plant items, including compressors. Acoustic treatments for the crane engine and management controls for the restriction of times of use must meet the acoustic criteria set out in the Acoustic Logic Acoustic Assessment.
- (d) Demonstrate that commercial buildings adjacent to Chatham Avenue will achieve the required internal noise level criteria for office spaces. This may be by the use of upgraded glazing of 6.38mm laminated glass, or 6.38mm laminated/12mm airgap/6mm glass if an insulated glazed system is used, or alternative measures as submitted in an acoustic report submitted with the detailed application.

2. Marina Development - geotechnical

Provide geotechnical details generally in accordance with 'Greater Taree City Council – Pitt Street Waterfront Precinct, the Geotechnical Assessment - Final Report', Coffey Geotechnics (16 June 2008) (Appendix R of the EA) as follows:

- (a) provide further detailed geotechnical investigation to assess the excavation potential for the marina location, including the extent of rock around the perimeter of the marina excavation;
- (b) analysis of the effect of seismic activity on piled foundations, including consideration of additional load on the pile head due to ground surface acceleration; and the interaction effects on the pile shaft due to lateral movement of the ground profile;
- (c) details of design in accordance with *Australian Standard Earthquake Code AS1170.4-1993*;
- (d) details of construction techniques;
- (e) construction management plan;
- (f) provide details of the marina berth capacity, including dry berths (storage);
- (g) demonstrate the marina will be outside of boundaries of the existing rowing course, and have minimal impacts on its safe operation;
- (h) undertake detailed hydrodynamic modelling to determine the final basin design;
- (i) determine the sub-surface stratigraphy for any proposed excavation for the marina and any proposed channel dredging. Investigate an excavated level of -3.0mAHD to allow for squat, siltation and under-keel clearance. Investigate the appropriate depth of the marina and account for low water levels; and
- (j) undertake a fluvial flow analysis under the full range of river conditions to ensure eddies are not created and to protect water quality within the area of the proposed marina.

3. Marina – Environmental Management

- (a) Provide details of any sewer pump-out facilities.
- (b) Provide details of water pollution protection measures for marina maintenance facilities.

4. Traffic, parking and access

- (a) Provide details of vehicular access to and through the precinct and the treatment and resolution of pedestrian conflict points, particularly for:
 - i. precinct entry point(s);
 - ii. car parking area and vehicular access to the south west of the public wharf; and
 - iii. mixed use area commercial parking area adjacent to Gregory Close.
- (b) Provide details of boat trailer parking.
- (c) Provide plans and details of pedestrian access through the Marina Commercial Precinct, including surface treatments (materials and finishes), resolution of conflict points, and privacy for adjoining land uses, as follows:
 - i. pedestrian access point on the Old Pacific Highway from the entertainment precinct;
 - ii. access along the public wharf;
 - iii. access to John Street; and
 - iv. car parking area to the south-west of the public wharf, and interface with the wharf, and open space to the west.

5. Stormwater management:

Provide a detailed site-specific storm water management plan (separated from the existing storm water drainage). The plan must be prepared by a suitably qualified person and address the following:

- (a) measures based on Water Sensitive Urban Design Principles which address impacts on the surrounding environment, drainage and water quality controls for the catchment, and erosion and sediment controls at construction and operational stages;
- (b) a detailed design layout plan for the preferred storm water treatment train showing location, size and key functional elements of each part of the system must be submitted with each development/project application;
- (c) detailed storm water analysis based on the accepted rainwater harvesting and grey water re-use strategy adopted by Council for the approved project;
- (d) MUSIC modelling to demonstrate the achievement of appropriate water quality objectives;
- (e) assessment of local drainage comprising assessment of the future creek channel upgrade and proposed storm water system design for the site;
- (f) hydraulic modelling for the unnamed creek within the site including assessment of a local drainage scenario involving local catchment runoff only with no tailwater flooding from the river;
- (g) maintain environmental flows and inundation patterns in the watercourse so that post-development flows match or are better than pre-development flows. Address the impacts of post-development run-off on the surrounding environment;
- (h) hydraulic processes and impacts of excavations on groundwater particularly in the Commercial Marina Precinct; and the impacts on surface and groundwater hydrology during construction and operation;
- (i) demonstration that all structural works for storm water capture and treatment are located outside any riparian buffers. Consideration may be given to minor works located outside buffers subject to adequate justification being provided by the proponent; and
- (j) measures to prevent wet weather overflows of stormwater; to segregate contaminated and uncontaminated water; and for spillage controls and bunding.

- (i) demonstration that all structural works for storm water capture and treatment are located outside any riparian buffers. Consideration may be given to minor works located outside buffers subject to adequate justification being provided by the proponent; and
- (j) measures to prevent wet weather overflows of stormwater; to segregate contaminated and uncontaminated water; and for spillage controls and bunding.

7. Water Quality

- (a) A sediment and erosion control plan detailing best-practice measures to be implemented during construction and operation of the proposal.
- (b) A comprehensive water quality strategy addressing water quality and water reduction requirements, including bioswales, detention pond and remediation of the creek to filter stormwater prior to release to the Manning River.

8. Water Management

Provide details to the satisfaction of the approval authority of consideration of the objects and water management principles of the *Water Management Act 2000*; the rules of any water sharing plan for the locality; and the *NSW State Rivers and Estuaries Policy 1993*.

9. Groundwater

- (a) Identify all proposed groundwater works, including bores and excavation for the purpose of investigation, extraction, dewatering, testing or monitoring.
- (b) Address the requirements of:
 - i. NSW Groundwater Policy Framework Document, 1997;
 - ii. NSW Groundwater Quality Protection Policy, 1998;
 - iii. NSW State Groundwater Dependent Ecosystem Policy 2002;
 - iv. NSW State Rivers and Estuaries Policy 1993;
 - v. Guidelines for Controlled Activities 2008.

10. Flooding

- (a) A detailed flood assessment and flood evacuation plan generally in accordance with the relevant recommendations and conclusions of the Flood Impact Assessment, 15 May 2009, Issue C, Worley Parsons (Appendix H of EA).

11. Minimum floor levels

- (a) Demonstrate that all habitable floor levels and all electrical infrastructure will be located a minimum of 6.5mAHD, including a 1m freeboard.
- (b) Demonstrate that all basement car parking areas minimum floor levels will be 3.5mAHD.
- (b) The method of construction of basement car parking areas (open/undercroft or enclosed) must be shown in detailed plans in order to demonstrate the impacts of the design on local flood behaviour.

12. Riparian buffers

- (a) A riparian corridor management plan specifying minimum core riparian zones of 10m for the unnamed tributary in the northern part of the site (1st order watercourse), and 20-40m for the Manning river (9th order watercourse), in accordance with the NSW Office of Water requirements.
- (b) Detail any necessary changes to building envelopes identified by the riparian corridor management plan.

13. Flora and fauna

- (a) Undertake terrestrial and aquatic flora and fauna surveys and impact assessments in accordance with section 5 of *Threatened Biodiversity and Assessment: Guidelines for Developments and Activities* (DECC), including targeted surveys, mapping of species surveyed, and a quantitative study on seagrass and habitat to be removed. Note:

Reptile surveys are required to be conducted between November and March; and targeted surveys for the Green and Golden Bell Frog between August and March. The assessment must address the provisions of the *Fisheries Management Act 1994*, namely *NSW Fisheries Fish Habitat Protection Plan No. 1* and *Fish Habitat Protection Plan No. 2: Seagrasses*. The assessment must address the effects on and mitigation measures for hydrostatic processes and implications for flora and fauna.

- (b) Demonstrate that the design of the bio-filtration system will be sympathetic with and improve the condition of the Endangered Ecological Communities (EECs) proposed to be used.
- (c) Demonstrate that appropriate controls will be used to exclude the general public from accessing rehabilitation areas, and to encourage the public to use formed walkways.
- (d) Demonstrate the provision of interpretative signage in rehabilitated/retained areas or along walkways adjacent to those areas.
- (e) Undertake a bat survey, including spotlighting, and an ultrasonic bat call analysis to target the insectivorous microbat.
- (f) Undertake a frog search targeting the Green and Golden Bell Frog.
- (g) Undertake a full assessment for riparian habitat along the bank of the Manning River, including a survey for mangroves, seagrass, fish and invertebrates, benthic and other fauna, and details of the characteristics of the river bed particularly adjacent to the Marina Commercial Precinct. Prepare a Species Impact Statement for subsequent development applications (under Part 4 of the EP&A Act) if triggered by the results of that assessment.
- (h) An Assessment of Significance for each threatened species, population or community occurring, or likely to occur in the area affected by the proposal. The Assessment is to include consideration of direct and indirect impacts, pollution of watercourses and wetlands, sediment, nutrient and pollutant run-off, noise and vibration, increase in feral plants and animals, road fatalities, etc in accordance with section 6 of the above DECC guidelines.
- (i) A full description and justification of proposed mitigation measures to mitigate any adverse affects of the action on species and communities.

14. Urban design

Provide details regarding location, materials, height and setbacks for the following elements of interfaces for proposed building envelopes within each precinct, and in relation to adjoining properties outside of the site:

- (a) setbacks;
- (b) landscaping;
- (c) buffers
- (d) fencing;
- (e) acoustic treatments;
- (f) lighting;
- (g) pedestrian and cycle paths;
- (h) floor space ratio;
- (i) maximum building heights;
- (j) pedestrian and bicycle access through the site, including grades and intersection treatments; and
- (k) compliance with *State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development*, and *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*.

15. Energy Efficiency

Provide a comprehensive energy and carbon strategy for the site addressing the use of renewable energy sources during construction and operation generally in accordance with the 'Air Quality and Greenhouse Gas Emissions Assessment', Heggies Pty Ltd (10 Sept 2009) (Appendix P of the EA).

16. Water re-use

Undertake detailed analysis of opportunities to reduce potable water consumption as follows:

- (a) develop a daily urban water balance model over a minimum one year period to reflect seasonality of rainfall;
- (b) model periods of high and low annual rainfall to assess the effectiveness of rainwater harvesting and identify ideal rain tank volumes;
- (c) use the model to assess scenarios in more detail regarding key outcomes such as imported requirements and wastewater discharge; and
- (d) feasibility of sewer mining.

17. Bank Stability

- (a) Prepare a weed management plan for weedy sections of the bank to be retained, the vegetated drainage lines and riparian areas. Weed-infested areas must be replaced with native vegetation.

Demonstrate that the following will be achieved:

- (b) stabilisation and revegetation of eroded areas along the bank of the Manning River with 100% native species for sections where development is not proposed. If alternative species other than natives are proposed, this must be to the satisfaction of the approval authority.
- (c) stabilisation of the river bank using the rock fillet method, in areas where infrastructure (such as wharves) are not proposed.
- (d) Implementation of appropriate erosion and sediment control measures.

18. Acoustic impacts

Restaurants, bars, taverns:

- (a) Submit an acoustic assessment which demonstrates compliance with the Liquor Administration Board's emission goals set out in section 5.1.2 of the Acoustic Assessment, Appendix T of the EA.

Water stages, swimming pools, floating pontoons:

- (a) Submit details of compliance of noise from use of the stage with the acoustic criteria in section 5.1.1 of the Acoustic Assessment.
- (b) Demonstrate that sound power levels of any speakers positioned on stages and amplifying music will not exceed 95dB(A)_{Leq}. For speakers located elsewhere or if higher noise levels are required, demonstrate that satisfactory noise levels will be achieved.

Mechanical plant:

- (a) Demonstrate that acoustic treatments (plant enclosures, screens, in-duct treatments) will comply with noise emission objectives.

19. European Heritage

Provide details which comply with the following:

Manning Valley Dairy Co-operative and the former Dairy Farmers' factory:

- (a) The retention and incorporation of the buildings in the approved development through adaptive re-use.
- (b) The alignment of the railway siding must be reflected in future development via appropriate interpretation and integration into the landscape design.
- (c) Archival recording of the 1996 office must be carried out to the satisfaction of Council with details to be submitted with the relevant application.

- (d) Demonstrate that a conservation management strategy has been prepared for the Manning Valley Dairy Co-operative in accordance with the NSW Heritage Branch CMS Form Parts 1 and 2 to the satisfaction of Council prior to any works commencing in the Precinct.
- (e) Future development of the Dairy Heritage Precinct must be sympathetic to the buildings' existing fabric.
- (f) The Wooden Store shall be retained and in this respect must be subject to further review and testing of its structural adequacy.
- (g) The structural adequacy of the wharf structure. Otherwise, demonstrate that an archival recording will be undertaken prior to demolition.

Lime Kiln Wharf and Tramway site:

- (a) Demonstrate that care will be taken to ensure archaeological deposits associated with the Lime Kiln Wharf and Tramway will not be disturbed. Should it become apparent to the proponent that any deposits have been or are likely to be disturbed, the proponent must cease work and consult with the NSW Heritage Branch before any further work is undertaken.
- (b) Interpretation of the history of the site must be provided at the western entry to the Gateway Residential Precinct.

Produce Store:

- (a) If the Produce Store is to be changed or demolished the proponent must prepare an archival recording to the satisfaction of Council with a future application for development of the Figtree Commercial Precinct.

Archaeological potential along the Manning River Bank (above and below water):

- (a) The proponent must submit a detailed archaeological survey for the area along the river bank (Item No. 12 in the ENSR AECOM *Aboriginal and Historic Assessment* 10 March 2008) using remote sensing and limited vegetation clearing with the aim of locating underwater relics such as ships, and littoral structures such as abandoned and collapsed wharfs.

Pitt Street:

- (a) Demonstrate that the existing alignment and fig trees of Pitt Street will be maintained, and the planting of fig trees extended to the street's proposed easterly extension (Riverpark Village Precinct).

20. Aboriginal Cultural Heritage

This condition must be read in conjunction with Schedule 3, Condition 2 above.

- (a) Demonstrate that the Railway Cutting Aboriginal site on the riverbank levee in the far west of the site (Heritage Item No. 4 in the ENSR AECOM *Aboriginal and Historic Assessment* 10 March 2008) must be conserved by incorporation into the landscape design of the Gateway Residential Precinct. The proposed viewing platform and any pathways must not impinge upon the Aboriginal site and must be designed to minimise impacts upon the topsoil within the Aboriginal site.
- (b) Demonstrate that should there be any impacts from the proposal on the Railway Cutting Aboriginal site, including topsoil, the proponent will obtain the written consent of the Director-General of DECCW and prepare a research design outlining the methodology and processes required for the salvage of the site, in consultation with the registered Aboriginal stakeholders prior to endorsement by DECCW.
- (c) Demonstrate that the proponent will consult with the Purfleet-Taree and Forster Local Aboriginal Land Councils throughout development of the Pitt Street, Taree concept approval MP08_0039 in accordance with the DECCW-ratified, Council consultation protocols.

- (d) Demonstrate that the alignment of the railway siding will be reflected in relevant future application plans.

21. Asbestos management

Submit an Asbestos Management Plan for development of precincts affected by asbestos to the satisfaction of the approval authority. The plan must provide details regarding sealing and replacing of roofs.

22. Water and Sewerage

Submit a water supply and sewerage servicing strategy to the satisfaction of MidCoast Water for approval with the first DA for the site. The strategy must address required augmentations to service the approved project.

23. Crown lands management

Demonstrate that the relevant requirements of the NSW Land and Property Management Authority (LPMA) will be met.

24. Waste management

Provide a comprehensive waste management strategy for the site which addresses the use of recycled materials for construction and operation of development of the site, and a reduction in emissions associated with natural materials extraction.

25. Vegetation management

Submit a Vegetation Management Plan with relevant applications to the satisfaction of the approval authority.

**SCHEDULE 6
STATEMENT OF COMMITMENTS**

7.0 Statement of Commitments

In accordance with the Director General's Environmental Assessment Requirements, the proponent is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The table included in this section sets out commitments made by the proponent to manage and mitigate potential impacts arising from the project and subsequent stages.

Subject	Commitments	Approved by Whom	Timing
Approved Project	Development on the site will be implemented in accordance with the Concept Plan entitled 'Figtrees on the Manning Local Area Plan / Masterplan' prepared by Suters Architects and dated November 2008.	Department of Planning.	No timing. General Statement of Commitment
Voluntary Planning Agreement	A Voluntary Planning Agreement will be executed between the proponent and Greater Taree City Council to provide for the timely delivery of local infrastructure and community services.	Council	Prior to gazettal of the LEP for the site.
Development Staging Plan	A Development Staging Plan will be submitted prior to first stage DA and revised prior to each subsequent Stage. The Staging Plan will address: <ul style="list-style-type: none"> Total lots approved and outstanding balance. Lots proposed for each subsequent stage and any minor revisions from the concept plan approval or previous staging plan. Average lots sizes and areas. 	Minister for Planning or delegate	Prior to 1 st stage DA
Water Supply and Sewer Servicing Strategy	A Water Supply and Sewerage Servicing Strategy addressing augmentations required to service the development will be prepared following Concept Plan Approval. The Strategy will be submitted to the DoP prior to the lodgement of any PA or DAs for the site. No applications for the development of the site will be lodged until the DoP and Mid Coast Water have provided their written confirmation of their acceptance of the Strategy.	DoP / Council / Relevant service provider	Prior to 1 st stage DA
Road access and traffic	Vehicular access to the marina to the east of the site will allow for vehicles with boat trailers and heavy or oversized vehicles.	-	No timing. General Statement of Commitment

Subject	Commitments	Approved by Whom	Timing
	Circular road routes and once way roads with separate ingress and egress will be not be implemented.	-	No timing. General Statement of Commitment
Location of Central Road	The location of the proposed central road within the Concept Plan may alter as detailed designs evolve. Due consideration will be given to relocating the road to the north in the preparation of PAs or DAs for these areas of the site. This may be subject to a condition of Concept Plan Approval that PAs and/or DAs consider the relocation of the road in order to reduce potential impacts to mangroves.	The relevant consent authority for each stage.	No timing. General Statement of Commitment
Flora and fauna	<p>In accordance with Ecotone's recommendations (November 2007), future development on the site will implement the following recommendations:</p> <ul style="list-style-type: none"> ▪ The retention of the existing creek / drainage line to the north of the site and regeneration as appropriate. Much of the existing reedland / riparian areas will be incorporated into a restored wetland park. Modification to the tidal part of the creek will be avoided; ▪ The widths of riparian areas to be revegetated will be identified in relevant PAs and/or DAs for the site; ▪ Eroded areas of the river bank identified in the LAP (including those eroded by livestock) will be retained, stabilised and revegetated; ▪ To avoid further erosion, natural vegetation on the riverbank will be stabilised and rehabilitated with native species where development is not proposed. 	The relevant consent authority for each stage.	No timing. General Statement of Commitment

Subject	Commitments	Approved by Whom	Timing
Flora and Fauna	<p>In accordance with Orogen's recommendations (September 2009), future development on the site will implement the following recommendations</p> <ul style="list-style-type: none"> ▪ Terrestrial and aquatic (including marine) surveys and impact assessment will be undertaken with relevant DAs. The assessment will address the Fish Habitat Protection Plan No. 1 and Fish Habitat Protection Plan No. 2: Seagrasses developed by NSW Fisheries. Subsequent investigations may include effects on and mitigation measures for hydrostatic processes and implications for flora and fauna. ▪ The design of the bio-filtration system is to be sympathetic to the EEC's proposed to be utilised. The design must aim to improve the condition of the community; ▪ Appropriate erosion and sedimentation controls to protect the Manning River during and post construction will be provided; ▪ Appropriate controls to exclude general public from entering rehabilitation areas, and/or encourage persons to keep to formed tracks within walkways will be provided; and ▪ Construction of interpretive signage in retained areas or along walkways. 	The relevant consent authority for each stage.	With the relevant DA/PA.
Flooding and Sea Level Rise	<p>In accordance with the Worley Parsons Flooding Report (15 May 2009), the following will be implemented:</p> <ul style="list-style-type: none"> ▪ Habitable floor area will be above the anticipated future 100 year recurrent flood event, with a 1m freeboard. An evacuation route will be available along Pitt Street / Lyndhurst Street and will be capable to remain open during a 200 year recurrent flood event. ▪ Appropriate emergency egress, access to the foreshore and out of the site during flooding will be provided, subject to subsequent project/development applications. 	-	No timing. General Statement of Commitment

Subject	Commitments	Approved by Whom	Timing
	<ul style="list-style-type: none"> Floor levels will be above 3.5m AHD (including the basement car park level) and will therefore be at least 2m above the tidal water level anticipated under the high level impact scenario for sea level rise. 		
Heritage	<p>The Cooperative Dairy Group of Buildings (other than components approved for demolition in the Concept Plan) will be retained and incorporated into the development through adaptive reuse.</p>	-	No timing. General Statement of Commitment
	<p>In accordance with the ENSR Aboriginal and Historic Heritage Assessment (dated 10 March 2008), the following recommendations will be implemented:</p> <ul style="list-style-type: none"> The Aboriginal site on riverbank levee to the far west of the site will be conserved through its incorporation into open space zoning. No part of the viewing platform and pathway will coincide with the identified Aboriginal site; Waterfront access will be designed to minimise impact to the topsoil within the Railway Cutting Site. The alignment of the railway siding will be reflected in future development with interpretation and integration into the landscape (as appropriate); Care will be taken to ensure archaeological deposits associated with the Lime Kiln Wharf and Tramway are not disturbed. Should any deposits be disturbed, this will be done with the consultation with the Heritage Branch of the DoP; The alignment of fig trees along Pitt Street will be maintained; Where relevant, Project / Development Applications will include archaeological surveys along the river bank to locate potential underwater relics including wharves and other waterfront structures and the remains of a barge on the riverbed; 	-	No timing. General Statement of Commitment

Subject	Commitments	Approved by Whom	Timing
	<ul style="list-style-type: none"> The Wooden Store is retained has part of the Concept Plan approval, subject to further review and tests of its structural adequacy at DA stage, which may deem that demolition is warranted; The wharf structure identified in the AECOM/ENSR report (August 2009), will be repaired or replaced at DA stage. Archival recording of the 1996 Office associated with the Dairy Co-operative Complex will occur prior to demolition. 		
Mangrove and Bank Stability	Bank Stability and Erosion - following removal of horses and stock from the site, eroded areas along sections of the bank that will be retained, stabilised and revegetated. Best practice sediment and erosion control measures will need to be put in place during construction and where the bank is to be excavated along the Manning River. The construction area will need to be isolated from the river water to avoid water pollution.	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
	Weed Management - a weed management plan should be prepared for weedy sections of the bank, the vegetated drainage lines and riparian areas. Weed infested areas will be replaced with native vegetation.	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
	Fluvial flow analysis - should be carried out under the full range of river conditions to ensure that eddies are not created within the area of the proposed marina.	The relevant consent authority at the relevant stage.	With the marina Project Application.
	Water Quality - any discharge points to the Manning River or the tributary should be below the water mark or via dissipaters in order to prevent bank erosion. Water pollution protection measures will be required for any proposed maintenance facilities associated with the proposed marina.	The relevant consent authority at the relevant stage.	With the marina Project Application.

Subject	Commitments	Approved by Whom	Timing
Stormwater Management	<p>Stormwater Management Strategies will be submitted with future PAs or DAs and will include measures to prevent wet weather overflows and segregate potentially contaminated water from non-contaminated water. Construction management plans (CMPs) submitted with will be submitted with PAs, DAs or Construction Certificate applications. CMPs will include provisions to prevent adverse impacts to surface and groundwater resulting from construction works. These are to include measures for the prevention of spillages that may otherwise result in contamination of surface and ground water.</p> <p>WSUD principles and solutions will be implemented on the site including the provision of roadside swales for the capture and filtration of stormwater. A Water Sensitive Urban Design (WSUD) Strategy will be prepared. The WSUD Strategy will conform to statutory, Council and DECCW guidelines. Some of the water volume in roadside swales will flow to the restored wetland for detention and further filtration in ponds. Water runoff from roads will be treated prior to its release into creeks and/or the river to ensure no adverse impacts result from runoff.</p>	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
	Runoff from rooves is to be stored for reuse in irrigation to retain pre-development flows as far as practicable.	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
	Any discharge points to the river for treated stormwater will be below the low water mark, or shall utilize dissipaters to prevent bank erosion.	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
Acid Sulphate Soils (ASS)	<p>An Acid Sulphate Soil Management Plan (ASS) will be developed to address excavation adjacent to the river and shall involve either, including:</p> <ul style="list-style-type: none"> ▪ The neutralisation of ASS with lime prior to disposal, or reuse as fill or; ▪ Delineation of the lateral and vertical extent of ASS, its removal and 	The relevant consent authority at the relevant stage.	With the relevant DA/PA.

Subject	Commitments	Approved by Whom	Timing
	<p>subsequent excavation of non-ASS soil from beneath. The ASS will then be buried below the water table; or</p> <ul style="list-style-type: none"> Any other technical measures identified as part of further investigations on the site that will satisfactorily manage ASS impacts. 		
Contamination	<p>Site Audit Statements shall be provided in relation to the development of any localised areas of contaminated land identified in the Acid Sulphate Soils and Contamination Assessment by Coffey Geotechnics (dated 7 November 2007) at Appendix G, in particular:</p> <ul style="list-style-type: none"> The fuel depot to the west of the site. The extent of contamination down slope of the fuel depot should be further investigated to assess the extent and degree of groundwater contamination; The rail siding to the west of the site (which has the potential to be contaminated, given its past usage and its location adjacent to the fuel depot); Buildings of the Dairy Cooperative that contain asbestos cement and are potentially contaminated with other substances; A filled gully adjacent to Fishermans Co-operative that presents a moderate risk of contamination; The concrete batching plant, disused rural store and Big Oyster, which are of low, or no risk of contamination; and The area behind Sheathers Machinery land in the central area of Pitt Street. <p>Site Audit Statements will be prepared by an accredited Contaminated Lands Auditor for these localized areas of contamination. More detailed investigation and sampling is required in these localised areas of the site.</p>	The relevant consent authority at the relevant stage.	With the relevant DA/PA.

Subject	Commitments	Approved by Whom	Timing
	Future works should be undertaken in consultation with the auditor so that a Site Audit Statement can be issued on completion of the works.		
Marina development	<p>The development of the marina basin and berthing will be subject to detailed hydrodynamic modelling to determine the final basin design at the Project Application stage.</p> <p>Subsurface stratigraphy will be determined for any proposed marina excavation and for any proposed channel dredging. An excavated level of -3.0m AHD will be investigated to allow for squat, siltation and under-keel clearance. The depth of the marina should account for low water levels and should be further investigated as part of the detailed PA.</p>	The relevant consent authority for the marina.	With the marina Project Application.
Marina Geotechnical issues	Construction techniques set out in the Geotechnical Report by Coffey Geotechnics dated 16 June 2008 will be implemented.	The relevant consent authority at the relevant stage.	With the marina Project Application.
	The detailed recommendations for excavation, piling and the construction of basement areas, footings and other supporting structures contained in the Coffey Geotechnical Assessment dated 16 June 2008 will be observed in subsequent designs of the proposed development.	The relevant consent authority at the relevant stage.	With the relevant DA/PA.
Marina Operation and Management	A Marina Plan of Management including an environmental management plan (EMP) will be implemented for the operation of the marina to the east of the site. The EMP will address all relevant issues associated with the use, inspection, maintenance and repair of the marina. It shall ensure that the operation of the marina complies with all relevant statutory and regulatory requirements, including those of the POEO Act and DECCW noise guidelines.	The relevant consent authority for the marina.	With the marina Project Application.

Subject	Commitments	Approved by Whom	Timing
	The scope of the EMP shall embrace the marina management guidelines; induction and training of staff and tenants in the safe operation of the marina; fire prevention and fire fighting; medical emergency; hazard management; navigational safety; fuel management and the use of sewage pump out equipment; solid and liquid waste management and prevention of waterway pollution.		
Construction, waste and traffic impacts	Construction Management Plans, Construction Traffic Management Plans and Waste Management Plans will be prepared for each stage of the development and submitted with future project/development applications.	The relevant consent authority at the relevant stage, including the marina stage.	With the relevant DA/PA.
Acoustic impacts	<p>The following recommendations of the Acoustic Logic report dated (5 November 2009) will be implemented:</p> <p>External Noise Impacts (Traffic)</p> <ul style="list-style-type: none"> Some upgraded single glazing necessary to the commercial buildings located adjacent to Chatham Avenue will be provided as per the indicative treatments presented in the acoustic assessment. <p>Mechanical Plant</p> <ul style="list-style-type: none"> Detailed review of all plant items will be undertaken at Construction Certificate stage and acoustic treatments (plant enclosures, screens, in-duct treatments) determined in order to ensure noise emission objectives are met. Noise from plant (including air-conditioners) will be attenuated through appropriate plant location and the installation of acoustic screens or enclosures (subject to assessment of subsequent project or development applications for the site). 	The relevant consent authority at the relevant stage	With the relevant DA/PA.


Subject	Commitments	Approved by Whom	Timing
	<p>Car Park on the eastern property boundary and Boat Ramp</p> <p>A 1.8m high fence will be installed along the eastern boundary of the site adjacent to the marina car park and along the eastern edge of the hardstand area of the boat ramp. The fence (if required) will be imperforate (no holes) and constructed using lapped and capped timber, Colorbond or masonry.</p> <p>The provision of this fence is not required if alternative ameliorative measures are provided at the DA stage or the specific design of the marina meets the noise guidelines stated in the Concept Plan Acoustic Report. Appropriate landscaping will be provided alongside the fence to ensure its appearance is consistent with surrounding development and does not result in adverse visual impacts.</p> <p>Marina</p> <p>Noise from the marina shall comply with the acoustic criteria set out in Section 5.1 of the Acoustic Assessment.</p> <ul style="list-style-type: none"> Noise levels from the marina crane are dependent on the make and model of the crane installed there. Detailed acoustic assessment of the crane and other plant items such as compressors will be conducted at Construction Certificate stage after selection of plant. Acoustic treatment to the crane engine and management controls (restriction of times of use) will be determined to meet this criteria; Use of equipment such as the marina crane, high pressure hoses, compressors and power tools will be determined in a marina plan of management, so as to avoid impacts to surrounding noise receivers; 		

Subject	Commitments	Approved by Whom	Timing
	<p>Restaurants/Bars</p> <ul style="list-style-type: none"> Noise levels resulting from restaurants on the site are to achieve compliance with the noise goals in the acoustic report through appropriate control of patron numbers, music noise levels and operating times. If necessary, additional acoustic treatments such as noise absorptive linings and screens may be incorporated; Future DAs required for restaurants or bars with amplified music or outdoor dining or smoking areas should include an acoustic assessment demonstrating compliance with Liquor Administration Board noise emission goals and the criteria specified in the Concept Plan acoustic report. <p>Stage/Swimming Pool</p> <ul style="list-style-type: none"> Noise from the use of the stage will comply with the criteria set out in the acoustic report. Technical measures (including those relating to the positioning of speakers) may be required for performances of amplified music on the proposed stage. Performance without amplified music will comply with the set criteria without the need for acoustic treatments. 		
Utilities	Future development on the site will include upgrades to energy, water, sewer and telecommunications infrastructure in accordance with service provider requirements. The developer for each stage will upgrade energy, water and telecommunications infrastructure to relevant service provider requirements.	Relevant service provider	With the relevant PA/DA
Energy and Water Efficiency	<p>In accordance with ARUP Sustainability Assessment (June 2008), the following measures will be targeted to reduced energy consumption and greenhouse gas emissions:</p> <ul style="list-style-type: none"> The incorporation of solar hot water systems and photovoltaic systems on roofs where feasible; 	The relevant consent authority at the relevant stage	Detailed in the relevant PA/DA

Subject	Commitments	Approved by Whom	Timing
	<ul style="list-style-type: none"> ▪ A grey water recycling and rainwater collection system to provide all irrigation water as required; ▪ Installation of 3.5 star rated Water Efficiency and Labelling Standards (WELS) rated water fittings in dwellings; and ▪ The achievement by future multi unit residential developments of a minimum of 4 stars from the Green Star Multi Unit Residential Tool. 		
Air Quality	<p>The air quality recommendations set out in the Air Quality and Greenhouse Gas Assessment by Heggies Australia (dated 10 September 2009) will be implemented during the construction and use of future development on the site. These recommendations include:</p> <ul style="list-style-type: none"> ▪ A construction dust management plan to reduce impacts from dust and particulate matter that may result from construction activities; ▪ The restriction of sanding and abrasive blasting activities in the marina workshops with suitable dust extraction systems or areas that are surrounded with appropriate shrouding fences; ▪ Restriction of outside painting and re-spraying of vessels in the marina to minor repair and detailing work and the utilization of technologies that reduce solvent evaporation; ▪ Restriction of fibre glassing activities to enclosed areas fitted with appropriate ventilation controls; ▪ The use of vapour check valves and locking caps at the unloading point in the delivery of fuel to the marina; ▪ The use of technologies such as single-action diaphragm pumps in marina sewage pump-out systems to minimise potential for odor emission; and 		During Construction

Subject	Commitments	Approved by Whom	Timing
	<ul style="list-style-type: none"> The use of methods typically implemented in food preparation to activities for capturing cooking fumes. 		
Waste	Allowance will be made for the future collection of waste by waste contractors in accordance with all relevant regulatory requirements.	Council	During construction
Erosion and sediment control	Best practice sediment and erosion control measures will be implemented to contain and treat runoff from land based construction. Where the bank of the Manning River is to be excavated, the construction area will be completely isolated from the river water to avoid water pollution.	-	During construction



Major Project Number: 08_0039 approved on 3 May 2011
by the Deputy Director-General, Development Assessment &
Systems Performance, under delegation from the Minister for
Planning & Infrastructure, in accordance with the *Environmental
Planning & Assessment Act 1979*, subject to conditions of
approval.
Signed:  Pages 1-80
inclusive



FIGTREES ON THE MANNING

TAREE, NEW SOUTH WALES
LOCAL AREA PLAN / MASTER PLAN

Prepared by:

Suters Architects in collaboration with,

S-Lab, Steffen Lehmann

McGregor Partners

Arup Sustainability

Connell Wagner

Asquith & DeWitt

01.	VISION STATEMENT	01	06.2	Diagrams	32
02.	EXECUTIVE SUMMARY	03	06.2.1	Images	32
03.	DESIGN PRINCIPLES	05	06.2.2	Plaza + Paving	32
03.1	Planning + Design of the Masterplan	06	06.2.3	Landscape	33
03.2	Place Capital + Gap Analysis	07	06.2.4	Boardwalk	33
04.	DEVELOPMENT CONTEXT	09	06.2.5	Existing Trees + Vegetation	34
04.1	Context Analysis	10	06.2.6	Proposed Trees + Vegetation	34
04.1.1	Mid North Coast Regional Strategy	10	06.2.7	Road Network	35
04.1.2	Local Area Strategy	10	06.2.8	Basement + On Road Car Parking	35
04.1.3	Taree Urban Analysis	11	07.	CHARACTER PRECINCTS	36
04.1.4	Site Analysis	12	07.1	Five Precincts	37
04.1.5	Context Height + Scale	13	07.2	Gateway Residential Precinct	38
04.2	Site Analysis	14	07.4	Figtree Commercial Precinct	44
04.2.1	Location	14	07.5	The Dairy Heritage Precinct	50
04.2.2	Land Ownership	15	07.6	Riverpark Village Precinct	56
04.2.3	River / Creek Setback	16	07.7	Marina Commercial Precinct	62
04.2.4	Rowing Course Setback	17	08.	PERFORMANCE MEASURES	68
04.2.5	Flooding	18	08.1	Development Controls	69
05.	KEY URBAN DESIGN STRATEGIES	19	08.1.1	Existing Controls	69
05.1	Visual Connections	20	08.1.2	Compliance with the Masterplan	69
05.2	Preserving + Integrating Public Buildings + Spaces	21	08.2	Car Parking	70
05.3	Natural Domain	22	08.3	Landscaping	72
05.4	Defining Main Street + Gateways + Pedestrian / Cycleways	23	08.4	Floodplain Management	76
05.5	Defining Public Spaces	24	08.5	Subdivision	76
05.6	Traffic + Infrastructure	25	08.6	Heritage	76
06.	THE MASTERPLAN	27	08.7	Stormwater Management	76
06.1	Development Masterplan	28	08.8	Sustainability	79
06.1.1	Public + Private	29			
06.1.2	Land Use Plan	30			
06.1.3	Land Use Form	31			

01. VISION STATEMENT



Figtrees on the Manning represents a unique opportunity in Taree to create a major and vibrant mixed use waterfront development that will help consolidate Taree as a major regional centre.

There will be a range of development outcomes including commercial and retail outlets, residential units, modern adaptive reuse of some of the substantial old dairy factory buildings, and a commercial marina. The commercial marina and a proposed 'boatel', will encourage boating use of the wonderful Manning River.

The development will underpin revitalisation of the site and allow a range of wonderful outcomes for the public. Including:

Objectives of the Masterplan

- To provide for a mix of landuses that will drive development of the site and achieve good private and public landuse outcomes.
- To ensure that redevelopment of the site will provide essential connections to Taree CBD as a Regional Centre, the adjacent residential precinct and the natural features of the site.

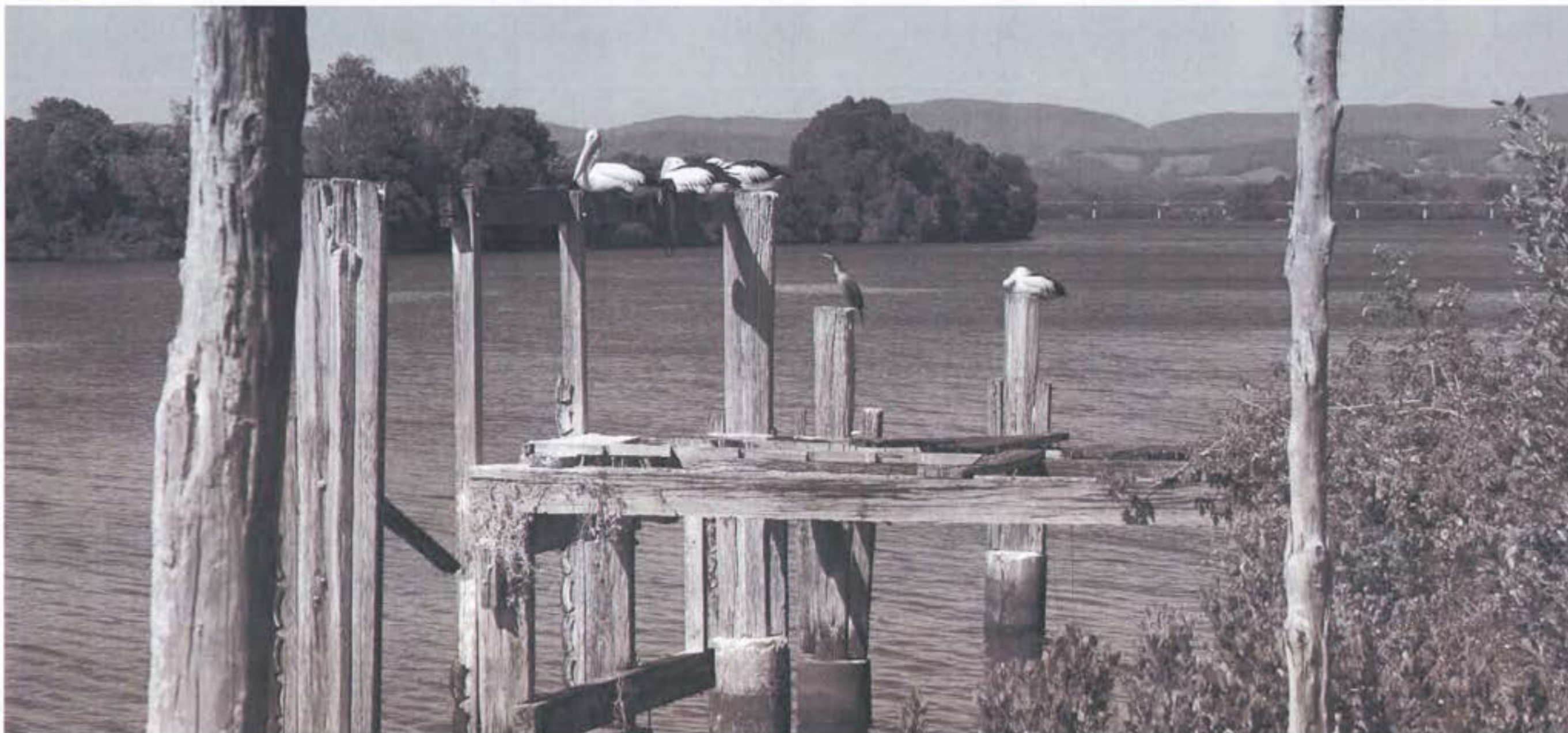
- To create a delightful public domain.
- To optimise utilisation of the waterfront location.
- To maximise the benefits from adaptive re-use of existing buildings and infrastructure on the site.
- To create a building form and envelopes that will achieve economic development and maximise amenity on the site and in the neighbourhood.
- To achieve an appropriate scale of development.
- To provide for and encourage boating activity.
- To effectively and efficiently provide transport facilities for cars, pedestrians and cyclists.
- To incorporate and demonstrate environmental sustainability and energy efficiency in the proposed development.

- To create a great sense of place in the design, and qualities in the development outcome.
- To achieve beauty, liveability lifestyle choice and make the site a very desirable place to live or visit.

The heritage qualities of the site will not be lost through redevelopment and reuse. The dairy and maritime history of the area will be presented in a museum as an adaptive reuse of the old generator building. A number of old substantive dairy factory buildings will be adaptively redeveloped for use as growers markets, coffee shops and restaurants, and these outlets will also provide an opportunity to present elements of the site's history. Naming competition run in the local community, has turned up a number of options to name aspects of the redevelopment after historic activities on the site. The old railway alignment will be retained as a cycle and pedestrian pathway through the site.

Overall the vision is to create a distinctive and vital urban redevelopment area with a quality public domain while optimising the utilisation of this wonderful waterfront location.

02. EXECUTIVE SUMMARY



This Local Area Plan (LAP) records the outcomes of the master planning process and community consultation for the Figtrees on the Manning site. The project represents the joint venture between GTCC and the three major land owners of the site and has seen significant involvement from the community in developing the urban design solution for the area. It commenced with a national design competition with Suters Architects and their consultant team of s_Lab, McGregor + Partners, ARUP, Connell Wagner and Asquith & DeWitt being engaged to complete the Masterplan.

The Figtrees on the Manning development presents a unique opportunity within Greater Taree for a high quality mixed-use development of broad regional significance. It proposes to maintain the existing qualities of the area, including both the natural elements

and built structures, endeavouring to create a vibrant and diverse community that is rich with the social, economic and environmental experiences of a fully realised urban tapestry. It will offer a community that celebrates past, current and future contexts and one that contributes robustly and positively to the development of Taree and the Waterfront Precinct along the Manning River.

The Masterplan is comprised of five precincts that each offer a different but complementary use which demonstrates the diversity of development potential for Figtrees on the Manning.

The first precinct forms the gateway to the site utilising the existing spotted gum reserve, rail corridor and modestly sized residential buildings to create a place which is inviting and encourages people

to enter and explore the site. The second precinct is proposed as a business hub comprised of high quality mixed use development that breaks out onto public domain areas and the waterfront. The unique character of the third precinct is based on reusing the magnificent existing heritage buildings and opening up the waterfront for people to live, work, play and interact together. The aim for the fourth precinct is to create a residential village within scenic existing landscape elements of the creek and the river. The fifth precinct will gain its unique character with the creation of a commercial marina – the working waterfront.

The LAP is intended to be read in conjunction with all other guide lines and controls relevant to the proposed development for Figtrees on the Manning.

03. DESIGN PRINCIPLES



03.1 Planning + Design of the Masterplan

In preparing the Masterplan the importance of the site was recognised as a catalyst to strengthen Taree's relationship to the waterfront. The site is located between the Botanical Gardens and the Entertainment / Sports and Recreation Precinct. The key vision of the Masterplan is to connect these two places with the Figtrees on the Manning precinct and form a necklace of precincts that activate the entire waterfront.

The proposal for these five precincts is for them each to have their own unique character providing a diversity of uses across the site. The various functions performed by each precinct result in a mixed use outcome benefitting the wider community.

Each precinct's various built elements segment the open space. Through the use of different materials in the landscape as well as the mix of the reused heritage buildings and contemporary architecture, a variety of spaces will be created providing both visual and physical dynamic experiences. Components of the design include hard and soft treatment of the water edge, floating river pool, viewing platforms, river stairs, pavements, timber decks, boardwalks, lighting, lawns, native trees and vibrant planting beds.

Consideration has been given to developing the flood prone land that occupies the majority of site. To limit the impact on the environment two major initiatives have been introduced: development is restricted

to ground above the flood level as much as possible limiting the effect on the flood line and it is also proposed that development will occur on a series of podiums were necessary to raise it above the flood line.

Therefore a responsible and sustainable urban design solution has been established as the appropriate model for the Figtrees on the Manning Masterplan.



03.2 Place Capital + Gap Analysis

Taree

- Regional service centre
- Manning Valley / National Parks
- Stop in for northern bound traffic
- Agricultural produce
- Leisure / Culture / Education / Unique Heritage

Existing

- hotel
- motel
- promenade
- cinema
- sport
 - regional centre
- health
- water sports
- retail
- pubs
- residential
- finance
- education
 - private
 - public
 - tafe
 - colleges
- transport
- automotive
- agriculture
- horticulture
- equine
- showground
- entertainment
- fishing
- rail
- XPT
- bypass
- dairy
- bus route
- airport
- entertainment centre
- aquatic centre
- racecourse

Gaps

- limited river connections
- art
- serviced apartments
- pedestrian link
- restaurants / seafood
- family / organic / farmers market
- music venue
- urban scale parks
- night club
- business incubation
- reception / wedding facilities
- bus station / break
- function space
- youth hostel
- child care
- motel / boatel
- waterfront
- sailing / yachts
- dry dock / marina / boat building
- fishing tours
- cruisers
- whale watching
- youth services
- tourism
- day spa
- health / fitness
- alternative housing
- cycling centre



04. DEVELOPMENT CONTEXT

04.1 Context Analysis

04.1.1 Mid North Coast Regional Strategy

The Mid North Coast Regional Strategy provides for balanced growth of the region. The strategy aims to protect the coast by focusing new settlement in areas identified on local strategy maps.

Taree is identified as a major regional centre. Major regional centres are expected to accommodate medium to higher density living, business, employment and professional services.

Taree has the land and infrastructure to support significant industrial and residential growth. Taller buildings are encouraged around Taree town centre.

The growth of Figtrees on the Manning, in accordance with the Masterplan, will provide for residential and business development consistent with the Regional Strategy.

04.1.2 Local Area Strategy

Figtrees on the Manning is currently zoned for rural, residential, open space and industrial uses.

The future of Figtrees on the Manning is established in the Taree Conservation and Development Strategy.

This strategy identifies the following opportunities:

- promotion of tourism
- provision of water front activities
- boating and marinas
- water based tourism
- links to Taree CBD









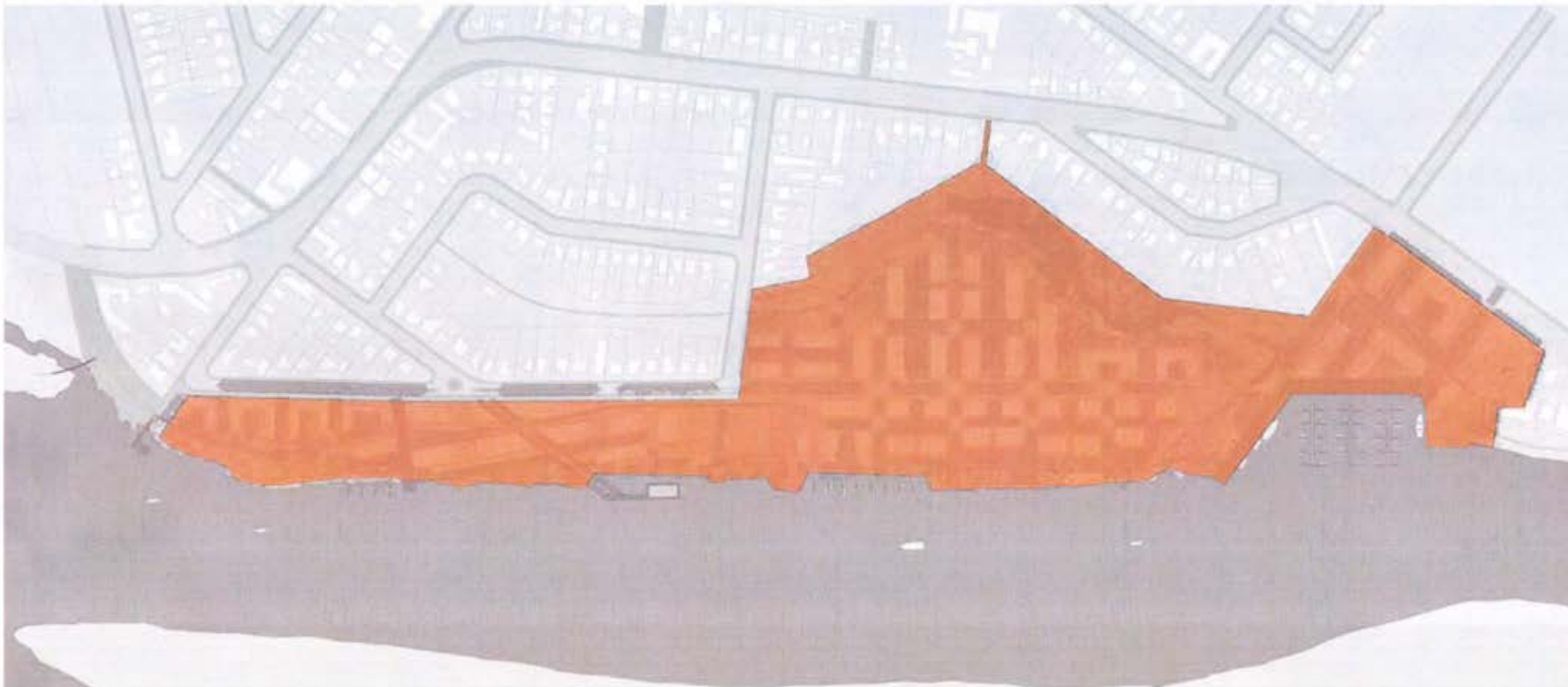
04.1.5 Context Height + Scale

Taree is a regional city with most buildings having low heights and modest scales.

Larger buildings are typically found in the main street but are otherwise dispersed and found on larger sites or adjoining infrastructure corridors. The biggest buildings usually relate to past or continuing rural industry.

The Figtrees on the Manning site has an association with the dairy industry and maritime services. Buildings of an industrial nature remain on parts of the site.

New development on the Figtrees on the Manning site should complement the regional city of Taree. It should allow height and scale consistent with main street development of Taree and those of the local rural industry while introducing a variety of bulk and scale across the site to both the streetscape and waterfront.



04.2 Site Analysis

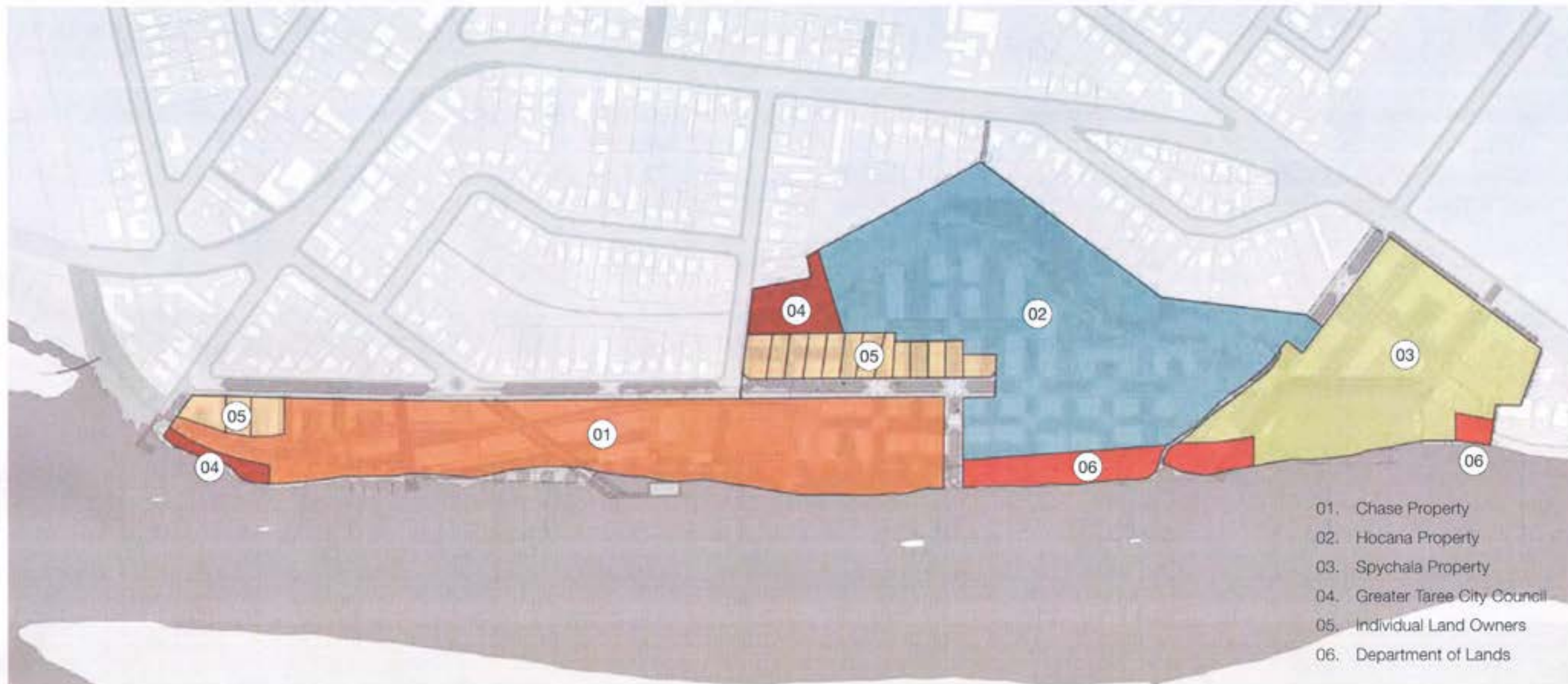
04.2.1 Location

The project site is located between the Manning River (North Arm) and Pitt Street in Chatham, Taree. The site is bordered to the north by Pitt Street, existing residential development and Chatham Avenue and to the south by the Manning River. The Botanical Gardens are located beyond Browns Creek to the west.

Satellite urban areas occur at Cundletown to the east, Taree South and Purfleet to the south, Tinonee to the southwest and parts of Wingham to the west. The surrounding area is characterised by a mixture of low and medium density residential, commercial, light industrial uses and rural agricultural lands. Located to the east of the

site is the Taree Entertainment Centre and Taree Airport with the CBD of Taree approximately 2km to the southwest.

Chatham Avenue is the main entry road into Taree from the east. Commercial uses such as car dealers and motels characterise Chatham Avenue. Chatham Park is located just north of Chatham Avenue.



04.2.2 Land Ownership

Ownership of the Figtrees on the Manning site is fragmented. The majority of the site is under three ownerships. This concentration of ownership is an opportunity as the planning and design of larger land parcels is more certain and allows for the ready creation of individual precincts reflecting location, past ownership and historical use.

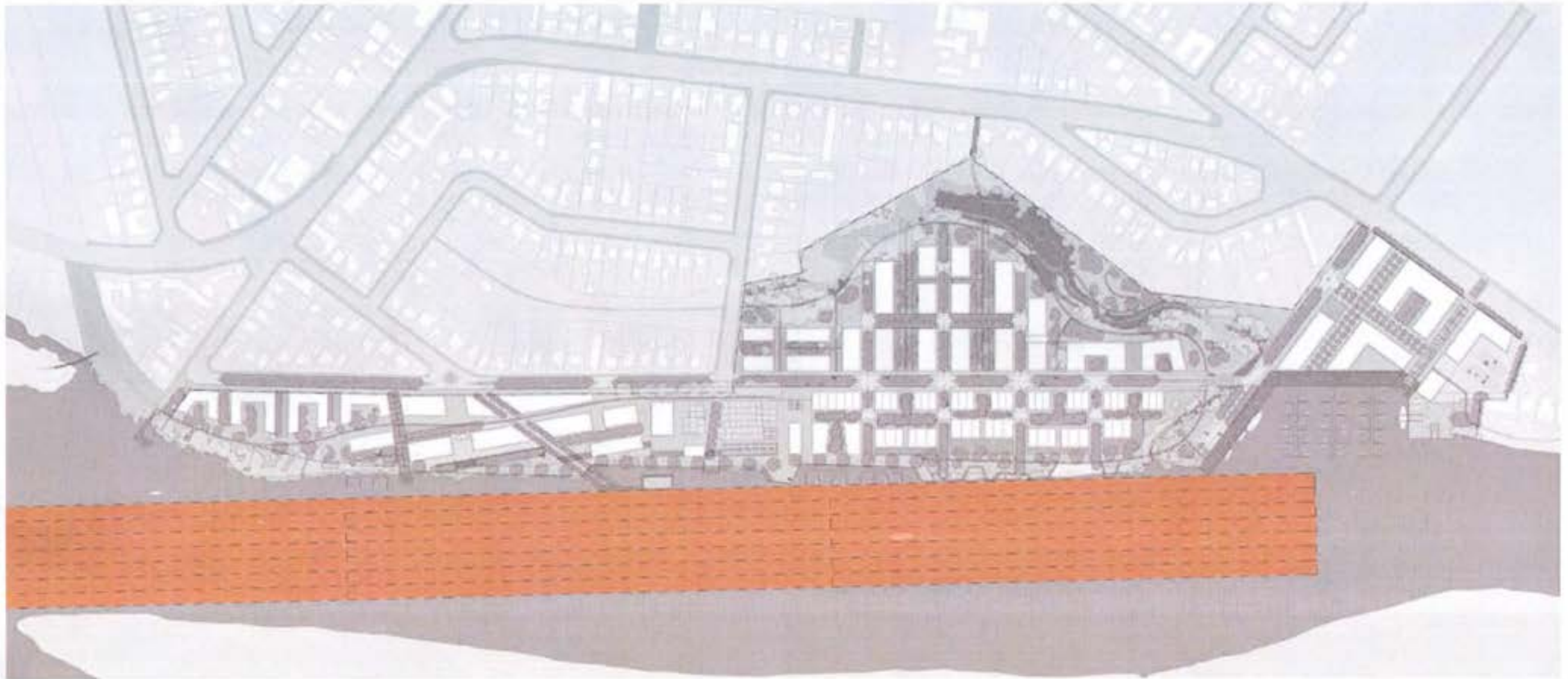


04.2.3 River / Creek Setback

Figtrees on the Manning is dominated by waterfront. Waterfronts are both an opportunity and a constraint.

Appropriate setbacks are required to address waterfront constraints such as flooding and to provide for opportunities such as public open space, visual amenity, natural corridors and tourism.

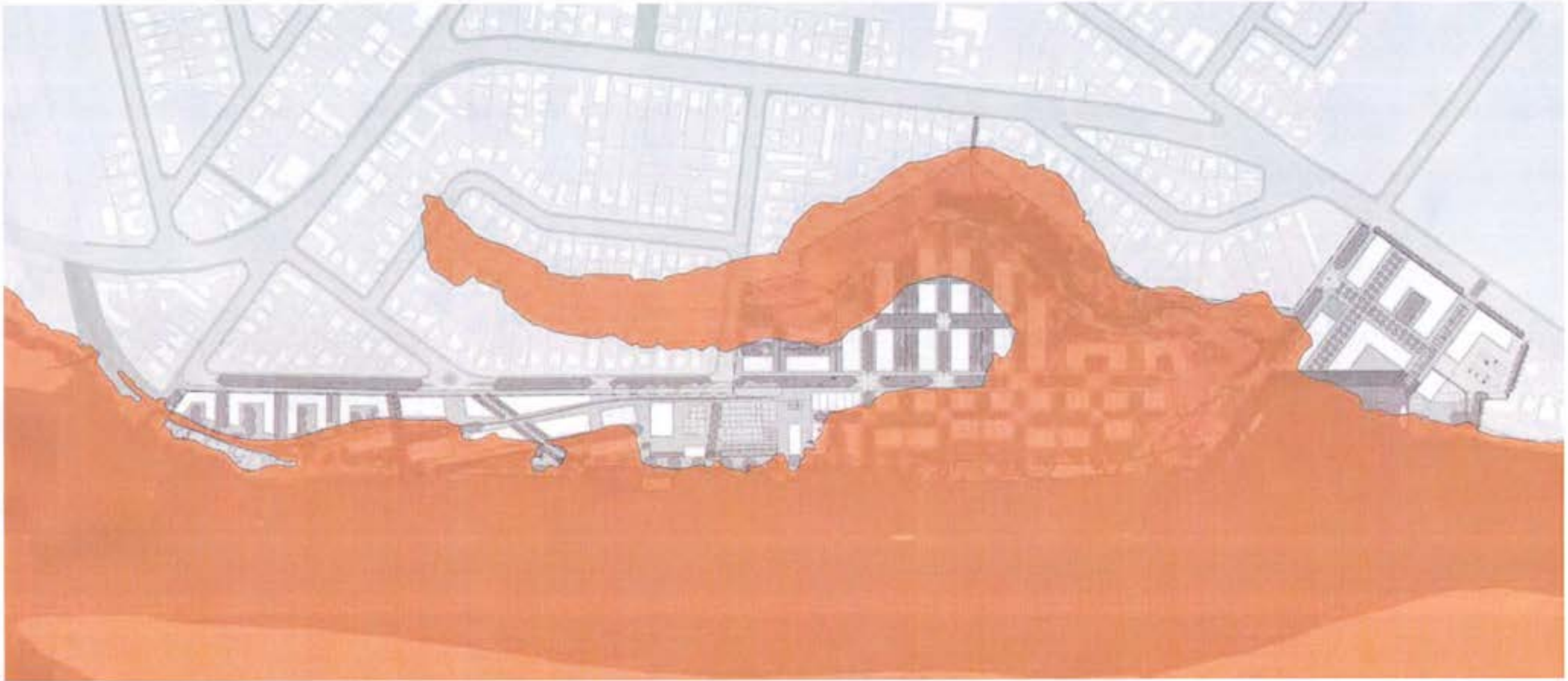
A setback that links the built and natural elements of the site and provides for a mix of waterfront uses is sought.



04.2.4 Rowing Course Setback

The rowing course is a major sporting and tourism asset. The physical integrity of the course must be maintained.

Development along the rowing course waterfront must not encroach on the rowing lanes and should complement and enhance the experience for rowers and spectators.



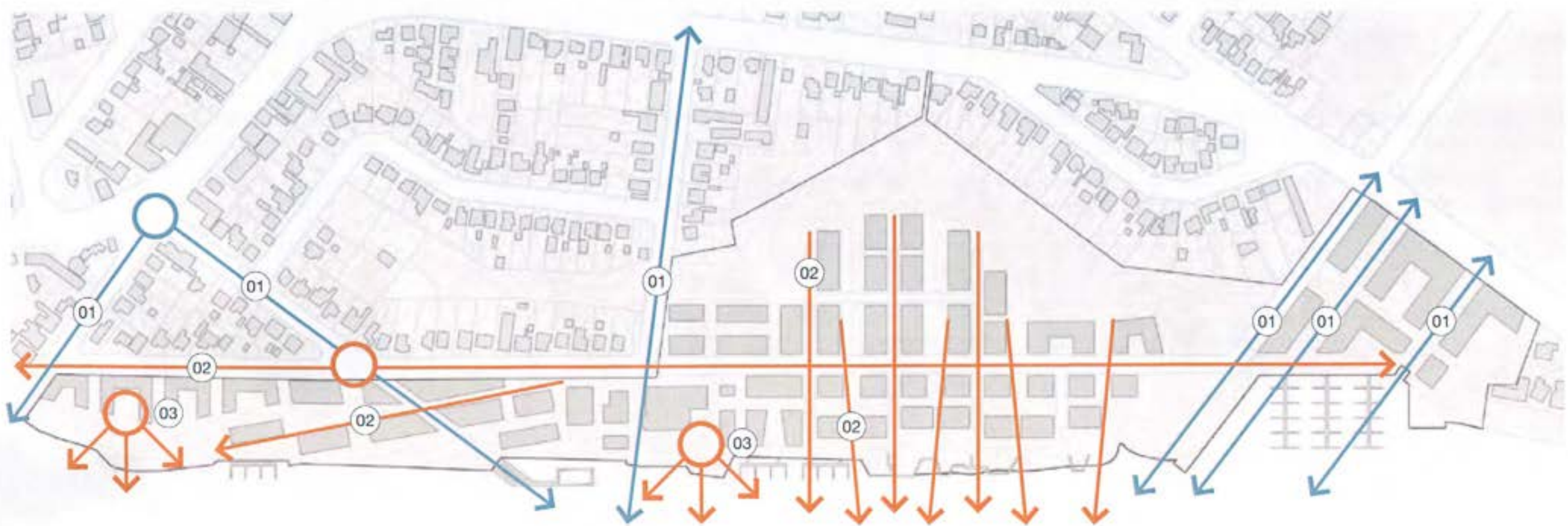
04.2.5 Flooding

Major flooding is a very infrequent but significant hazard.

Development can occur in flood prone areas provided people and property are not subjected to unnecessary or unacceptable risks.

Setbacks from the river can ensure that buildings are placed out of high hazard areas.

05. KEY URBAN DESIGN STRATEGIES



05.1 Visual Connections

- 01. Enhance key view corridors to and from the site connecting the river and character of native vegetation to the town.
- 02. Create view corridors in development planning to foster a link in built form and natural landscape.
- 03. Establish built form that harnesses the natural aspect of the site.



05.2 Preserving + Integrating Public Buildings + Spaces

- 01. Establish a relationship between local context and site through preservation and integration of existing heritage buildings and development of public space.
- 02. Integrate and respect existing heritage buildings.
- 03. Integration of existing landscape features.



Heritage / Major Public Domain Space

Natural Landscape Feature



05.3 Natural Domain

- 01. Primary level of street landscaping.
- 02. Secondary level of street landscaping.
- 03. Integration of key site landscape element.
- 04. Rehabilitation and preservation of landscape and riparian zones providing contiguous and permeable green space throughout the site.



05.4 Defining Main Street + Gateways + Pedestrian / Cycleways

- 01. Define major pedestrian / cycleway gateways to site.
- 02. Define main street gateways to site.
- 03. Establish major pedestrian / cycleway throughout site.
- 04. Establish main street.



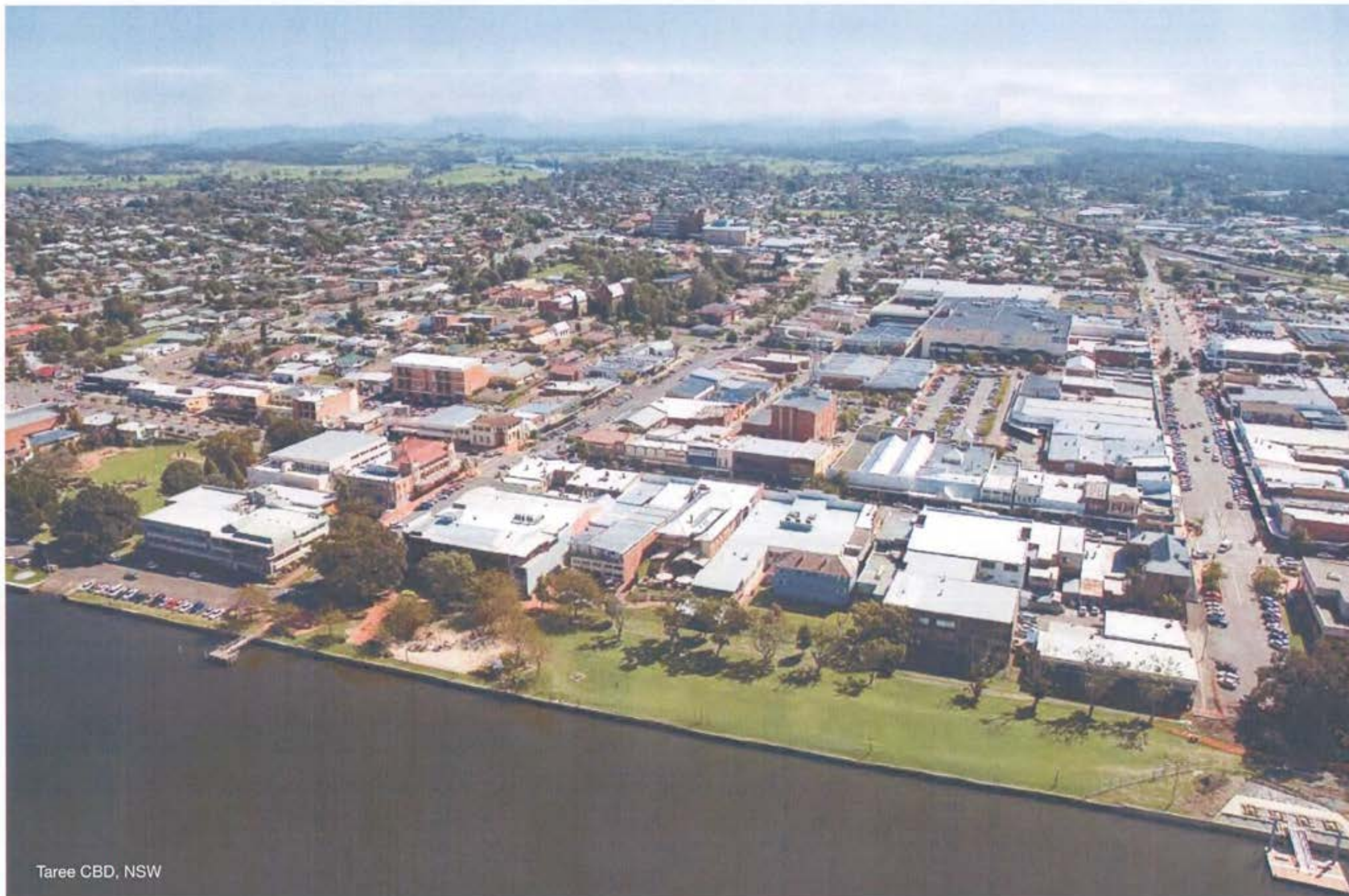
05.5 Defining Public Spaces

- 01. Develop key landscape zones for public activity.
- 02. Establish key public infrastructure throughout site.

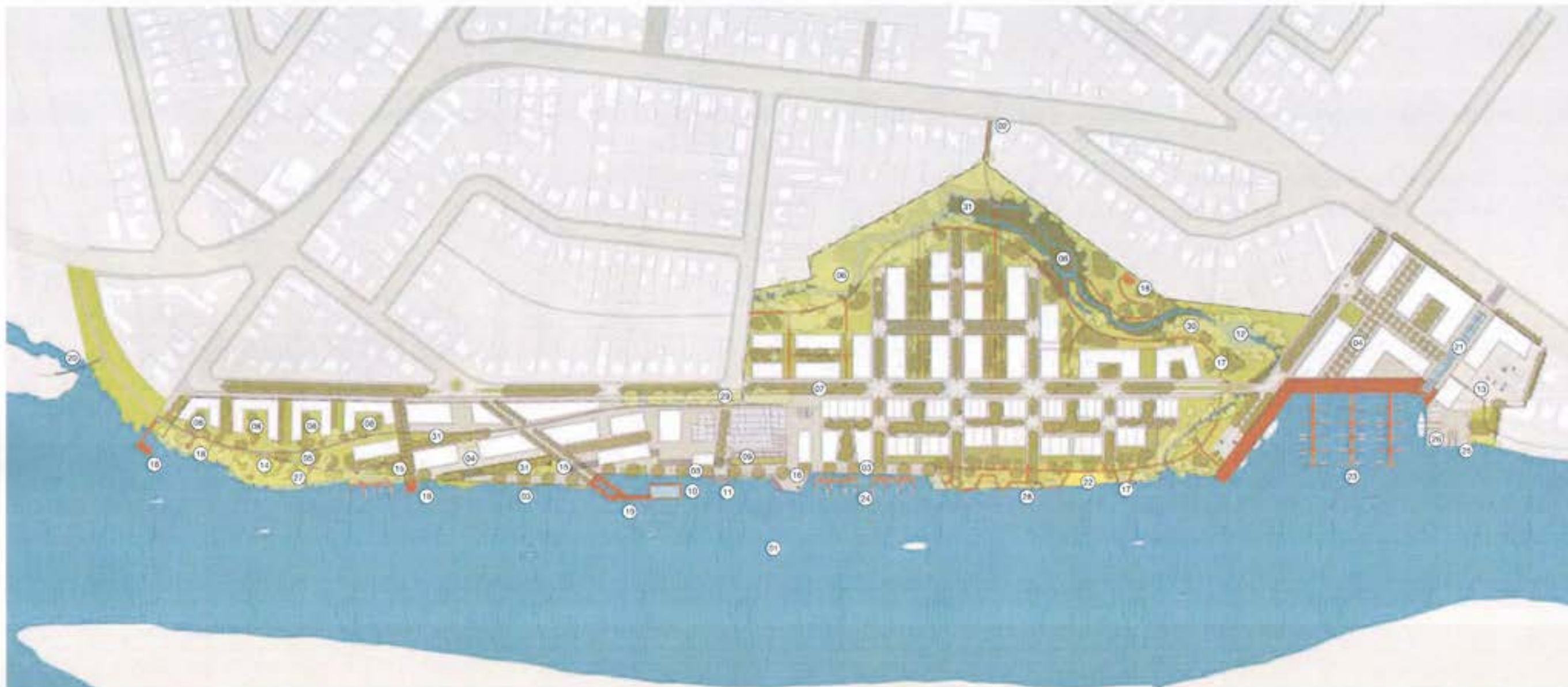


05.6 Traffic + Infrastructure

- 01. Maintain main traffic connection to town centre.
- 02. Establish key intersections and primary streets for site traffic.
- 03. Establish secondary street level for residential development.
- 04. Fibre-optic cable through site.



Taree CBD, NSW



06.1 Development Masterplan

- | | | |
|--|---|---|
| 01. Alignment of Existing Rowing Course | 12. Water detention / quality feature | 22. Beach |
| 02. Pedestrian Connection to Chatham Avenue | 13. Car Parking for Commercial Area | 23. Commercial Marina |
| 03. Urban Riverside Plaza With Constructed Edge To Water | 14. Shared Cycle Way + Footpath on Existing Railway Line | 24. Boatel Marina |
| 04. Retail Plaza | 15. Children's Play Area | 25. Boat Ramp |
| 05. Nelson Street Park | 16. Public Artwork / Sculptural Element | 26. Boat Crane on Timber Deck |
| 06. Wetland Park | 17. Raised Boardwalk + Bridges along river + Creek to connect Marina + Residential Precinct | 27. Existing Eucalyptus Community to be retained |
| 07. Pitt Street - Garden Boulevard | 18. Viewing Platform | 28. Existing Mangroves to be Retained |
| 08. Communal Gardens | 19. Floating Jetty | 29. Existing Fig Trees on Pitt Street to be retained |
| 09. External Seating / Dining Areas | 20. Bridge to Connect to Botanical Gardens | 30. Wetland Area with Native Aquatic Planting |
| 10. Floating River Pool / Stage | 21. Water Feature | 31. Stormwater Filtration Biotope / Bioswale with Native Wetland Planting |
| 11. River Stairs | | |

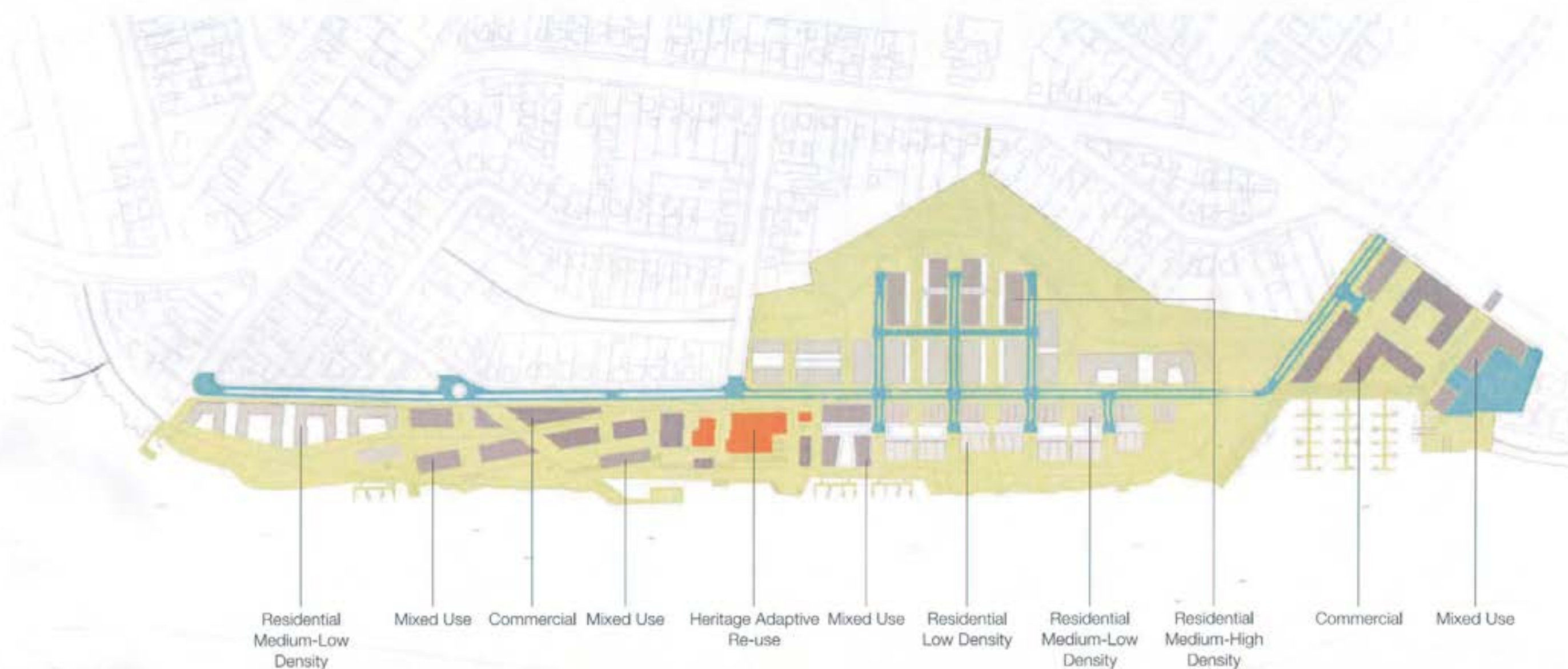


06.1.1 Public + Private

The Figtrees on the Manning proposal is for a residential and commercial development with a marina and community facilities that occupy the waterfront. Great consideration was given to developing the public domain aspects of the Masterplan. The scheme provides for a large expanse of publicly accessible space with areas of privately owned land dedicated for community use. The key vision for the Masterplan to connect Botanical Gardens and the Entertainment / Sports and Recreation Precincts of Taree established a link through the site via pedestrian paths, cycleways and boardwalks. This allows direct public access to the waterfront for the full length of the site and creates a multitude of unique development opportunities within the five precincts.

Key

- Public Space
- Privately Owned Space
- Public Accessible Privately Owned Space



06.1.2 Land Use Plan

- Residential - Low Density
- Residential - Medium-Low Density
- Residential - Medium-High Density
- Mixed Use
- Commercial
- Heritage Adaptive Re-use



06.2 Diagrams

The following diagrams illustrate the public domain components of the Masterplan.

06.2.1 Images

Images of potential for Figtrees on the Manning to be an inviting area in which to live, work and play.



06.2.2 Plaza + Paving

The main pedestrian access is from Pitt Street. All proposed roads have a footpath system. A key and integral part of the proposed development is a pedestrian connection from the CBD via the Botanical Gardens along the Manning River to the Entertainment / Sports and Recreation Precinct. A bridge over Browns Creek to the west of the development forms a major connection to the Botanical Gardens. The existing railway line will be reused as shared cycleway and footpath. A promenade along the river and the various precincts that front it will allow the community to experience the water in an urban context. A Wetland Park provides a path system along the creek. A pedestrian access from Chatham Avenue provides a connection through the site to the Manning River.



06.2.3 Landscape

The riverine vegetation within the subject site forms part of a network of corridors. The main ecological function of these corridors is to provide connectivity for both the movement of fauna and for the local exchange of genetic material between native flora species. This would tend to reduce the risk of local flora populations becoming isolated. Since the land in the Taree urban area has mostly been highly cleared for public or private infrastructure, the vegetation may also represent one of the last refuges in the local area of many native flora species. This is the case with the strips of remnant native vegetation along the creek and the riverbank. Please refer to the Ecological Constraints Assessment (August 2007) for more information.



06.2.4 Boardwalk + Jetty

Through the marina, jetties, viewing platforms, boardwalks and river pool / stage Figtrees on the Manning establishes a direct relationship with the waterfront making it accessible to all for recreational use.



06.2.5 Existing Trees + Vegetation

It is proposed to integrate, revegetate and retain where appropriate the Spotted Gum/Ironbark/Stringybark Forest, the Mangrove/Marine Riparian Forest, the Freshwater Reedland, the Freshwater Riparian and the Fig Trees on Pitt Street. There are varying levels of disturbance to allow the achievement of a mixed use development that will achieve social and commercial outcomes while respecting appropriate aspects of the natural environment.



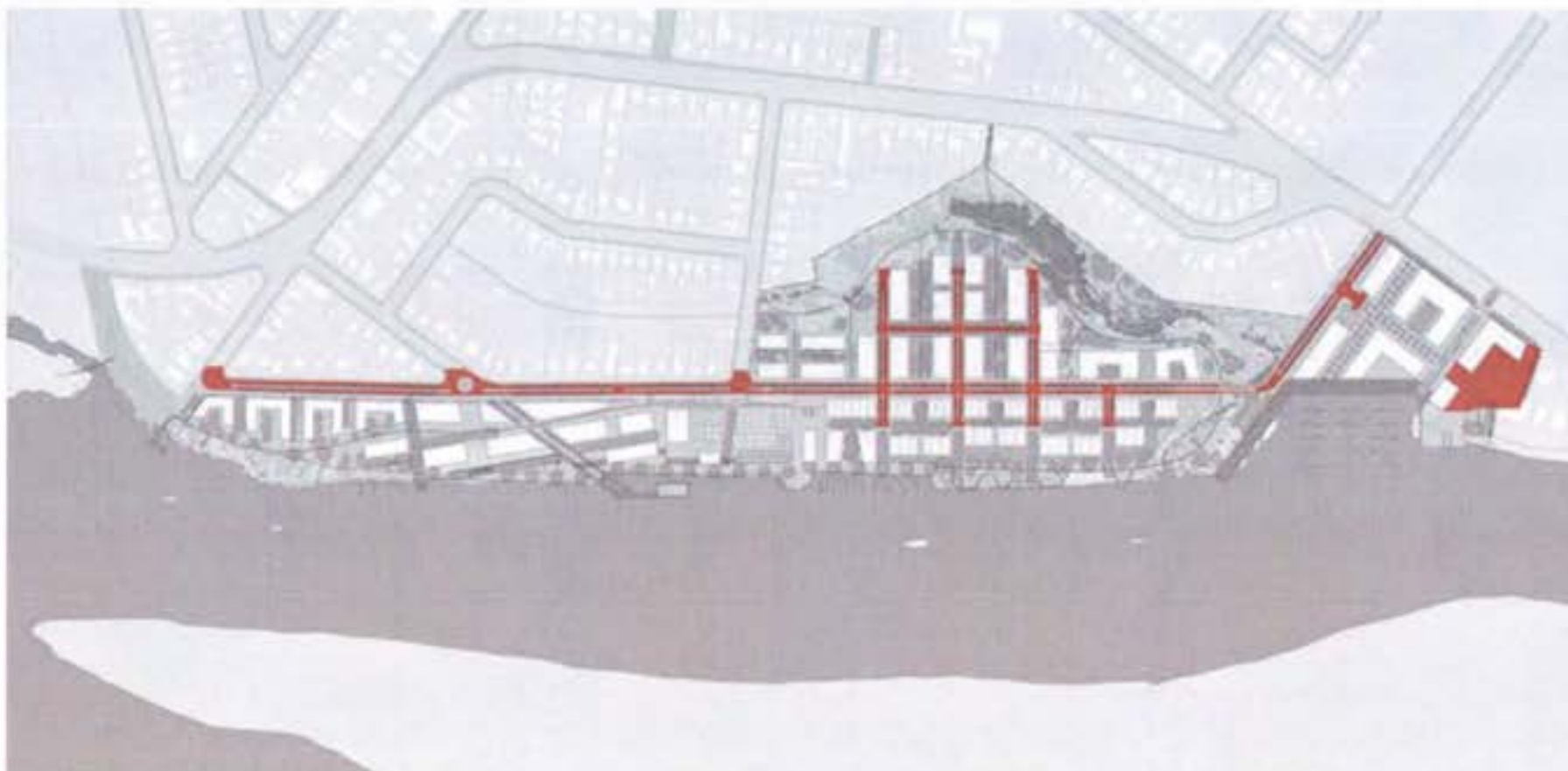
06.2.6 Proposed Trees + Vegetation

The design philosophy for the Landscape Architecture of the project encompasses expression of the remnant cultural heritage of the site through retention of most existing trees, reuse of most existing heritage buildings and refurbishment of the site. The project aims to fully adopt ecologically sustainable design principles. The design approach is influenced by the discipline of 'urban ecology', where the site design components are integral to the project's social, environmental and ecological systems. The primary site design objective has been to work with natural amenities such as flora and fauna, existing trees, existing topography, flood levels and setbacks from river and creek.



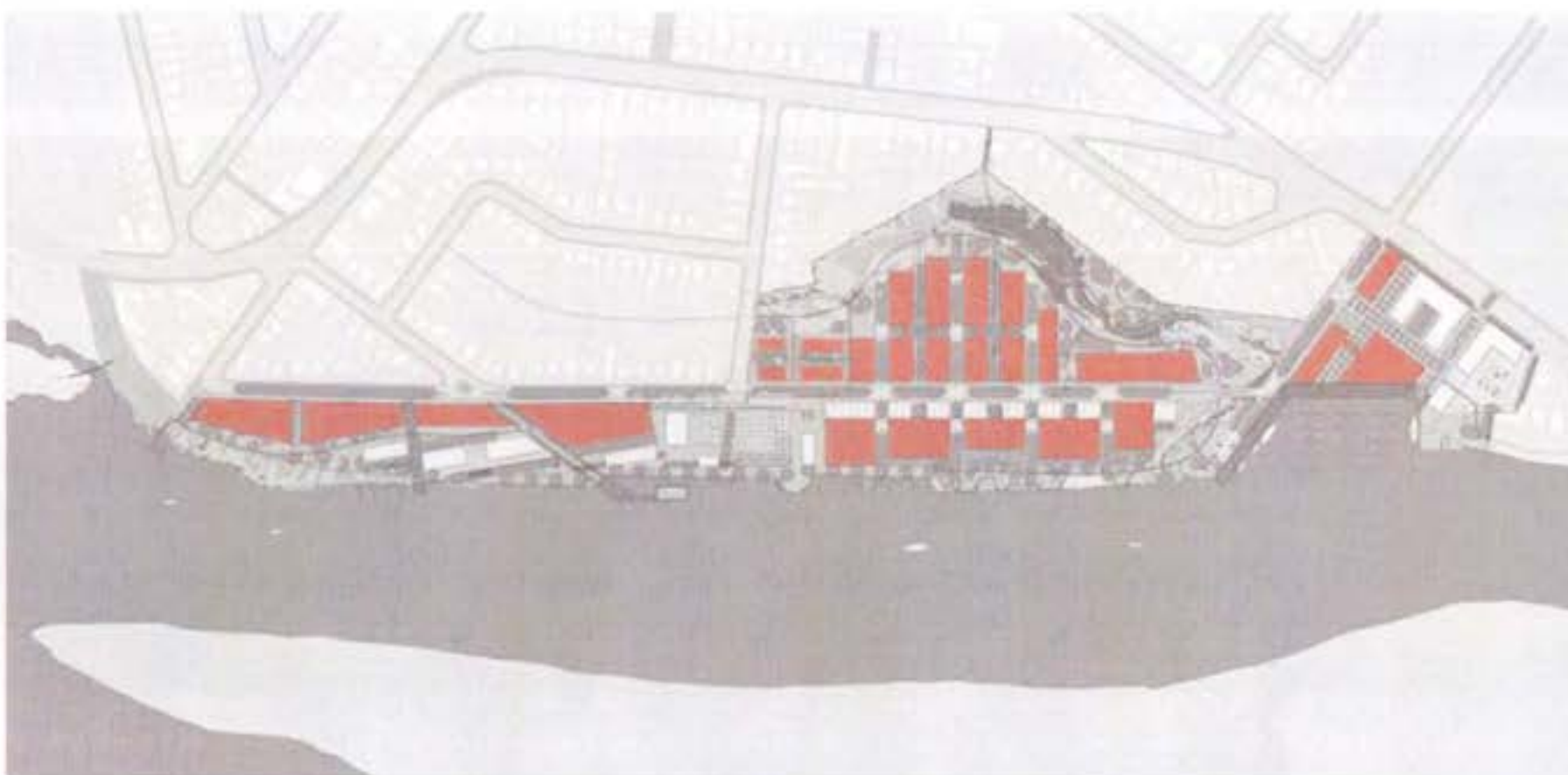
06.2.7 Road Network

The extension of Pitt Street to the northeast is proposed to provide access to the residential development. A turning head on the eastern end of Pitt Street will be designed as a small plaza. Four residential access ways to the south and three to the north are proposed to turn off Pitt Street. The three access ways in the north are connected with a residential loop road designed for passive surveillance and traffic calming. All residential roads lead into basement parking.

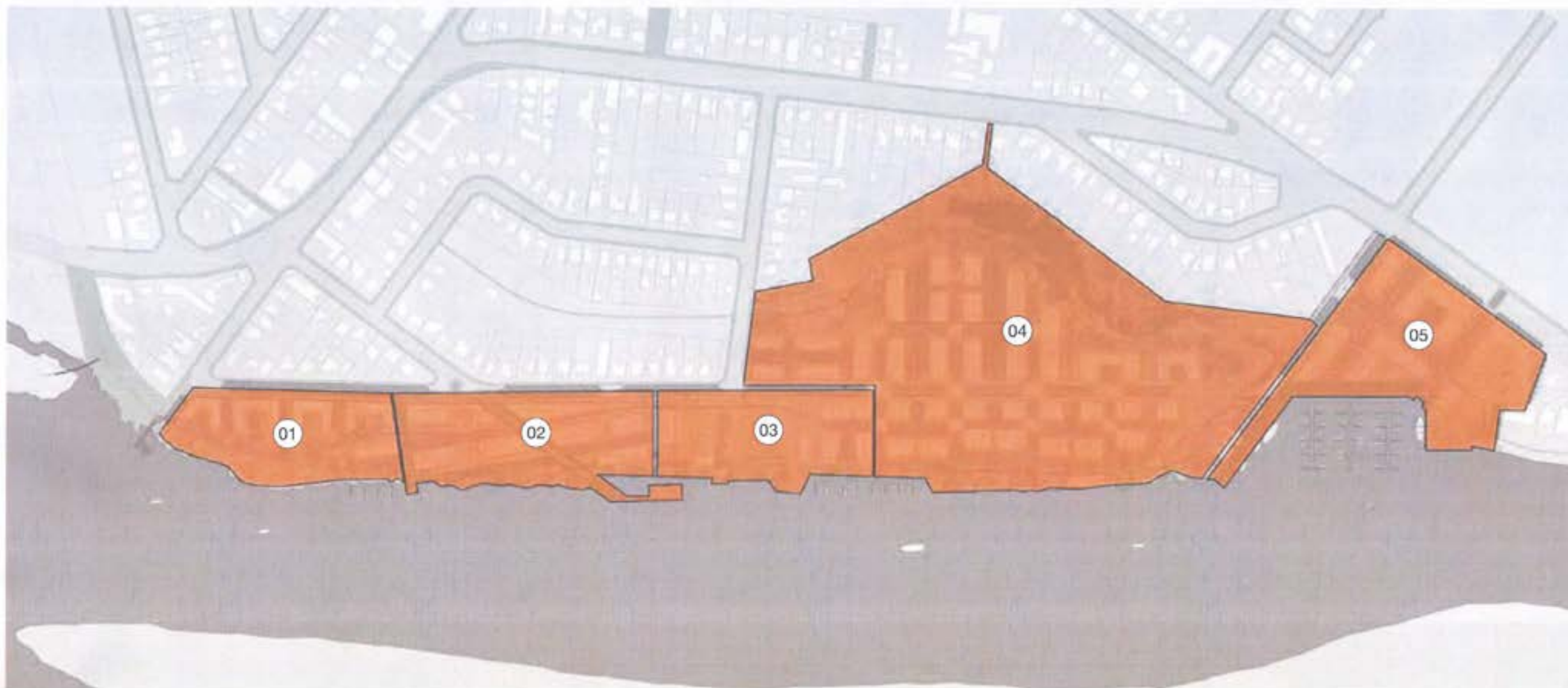


06.2.8 Basement + On Road Car Parking

Parking is to be predominately underground utilising the fall of the site and the need to keep buildings above the 1 in 100 year flood level. Parking will far exceed required parking for built form ensuring plentiful public parking to the river side of Pitt Street. Angle / parallel parking along Pitt Street will provide more opportunistic parks and provide a traffic calming effect.



07. CHARACTER PRECINCTS



07.1 Five Precincts

The proposal is for five main precincts, all with their own distinctive character and identity. The precincts are linked by road, pedestrian paths and cycleways.

- 01. Gateway Residential Precinct
- 02. Figtree Commercial Precinct
- 03. The Dairy Heritage Precinct
- 04. Riverpark Village Precinct
- 05. Marina Commercial Precinct

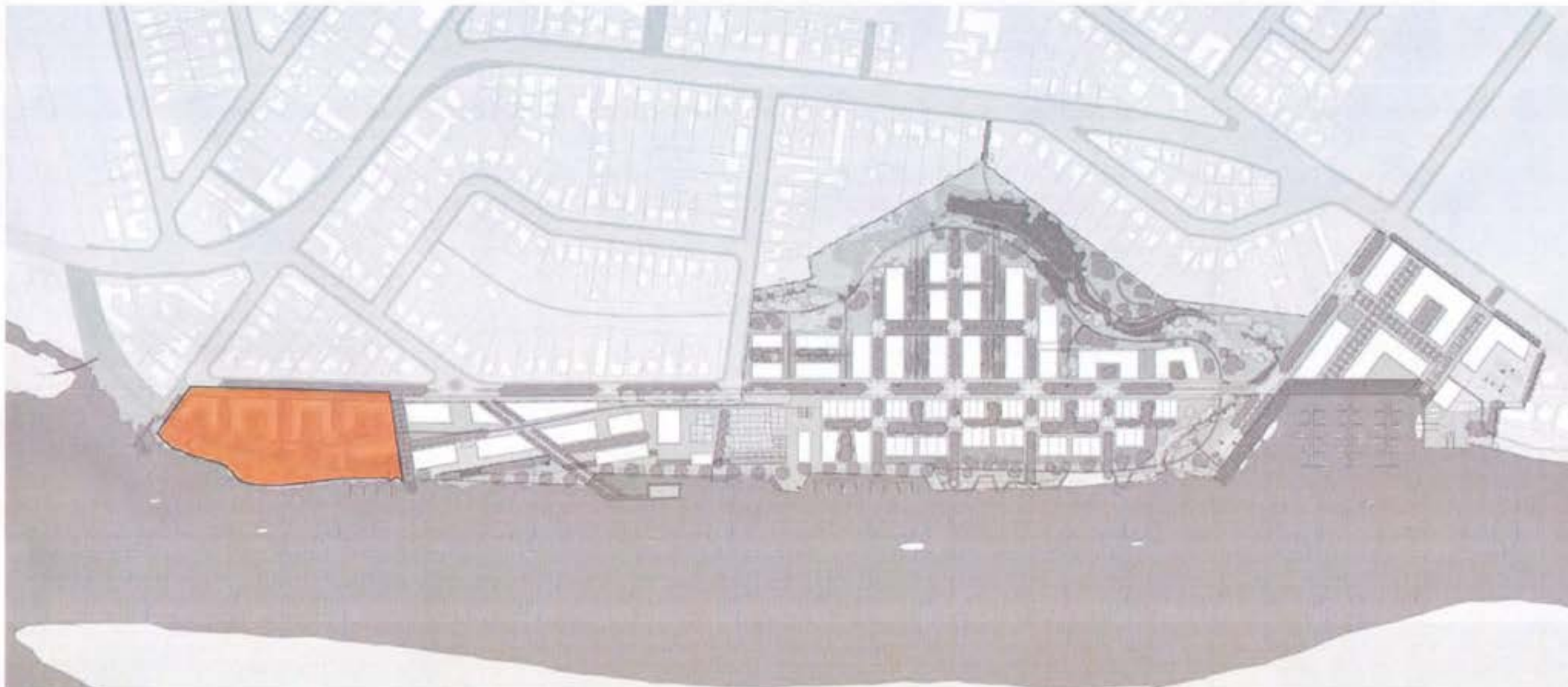
Mixed Use Definition

Mixed Use allows for a combination of Residential and Commercial uses.

- Commercial component could include: general office; general retail; cafes and; restaurants.
- Residential component is preferred to be incorporated in all Mixed Use areas and includes: permanent residential dwellings; serviced apartments and; short to medium term accommodation.

Commercial Definition

Commercial allows for a variety of more specific commercial activities and could include: retail; office; hotels; motels; boatels; pubs, clubs; night clubs; function centres; cinemas; function spaces; cafes; restaurants; take-aways; markets; health and fitness facilities; cultural facilities and; community facilities.



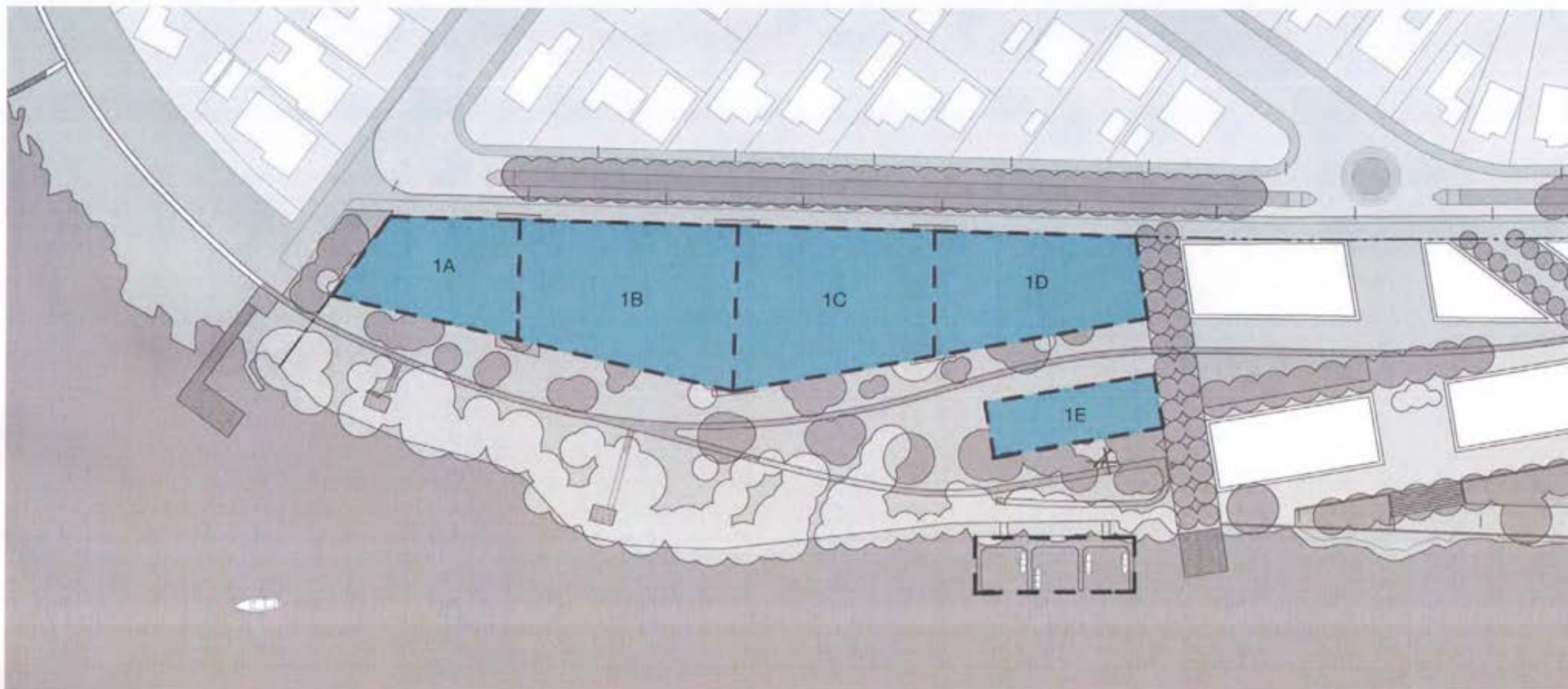
07.2 Gateway Residential Precinct

The Gateway Residential Precinct fronts Pitt Street on the north and the river to the south, and forms the western gateway to the site. It overlooks the natural ironbark and spotted gum reserve, historic railway cutting and walking tracks to provide many comprehensive vistas along the Manning River and into the public domain. The built form is of modest scale with predominantly three storeys which steps down to the adjoining residences and opens towards the river and public spaces, defining an ambient open area that encourages people to meet, interact and relax.





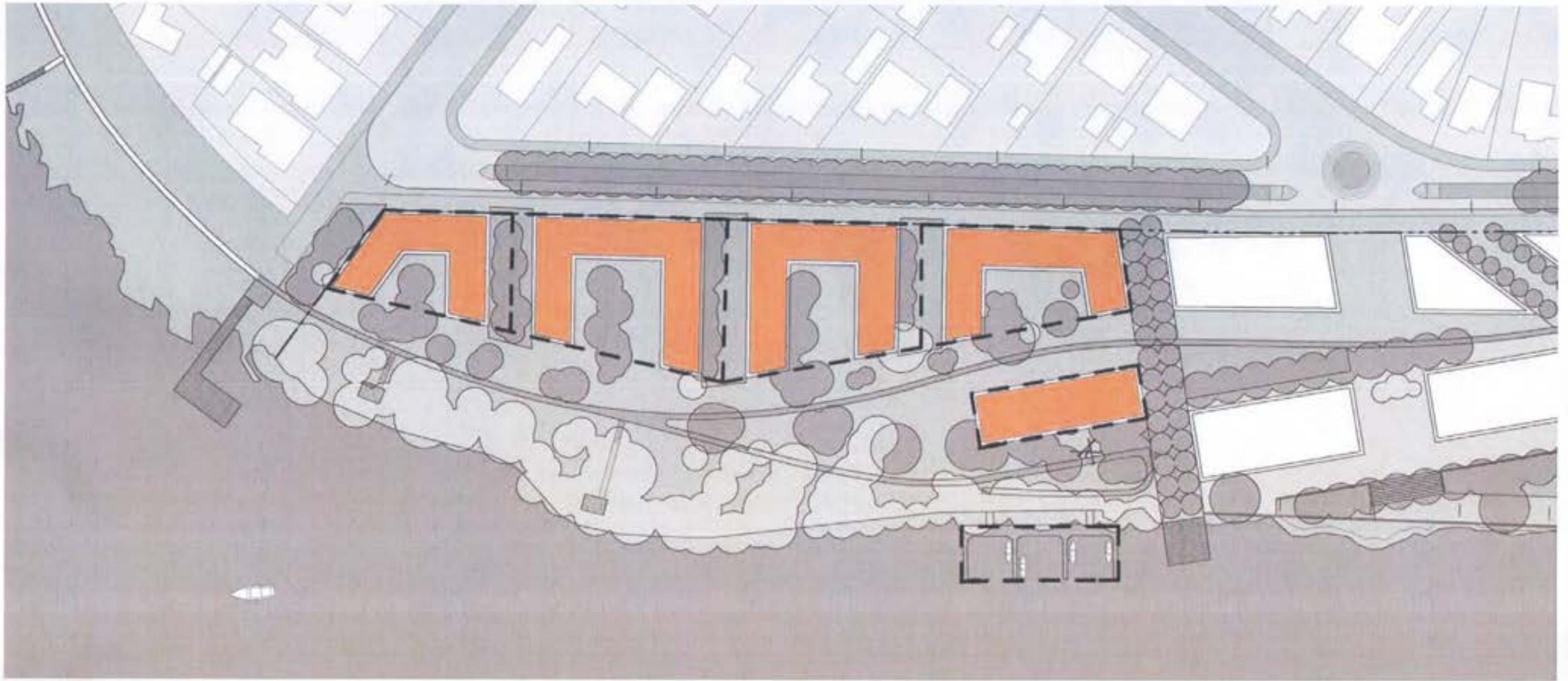
- Retention of the existing Eucalyptus community on the river and the Fig trees on Pitt Street provide the site with a pleasant environment and reduce the visual impact of the built form.
- The Nelson Street Park is the 'Gateway' into the site from the west. Entering either from the Botanical Gardens or Nelson Street through the old Railway corridor will be an extraordinary experience. After passing the raised old Eucalyptus community on the right and residential development on the left, the space will open up into wide Parkland with lawn, a children's play area and a picnic/BBQ area.
- The disused rail corridor is to be adapted to provide a pedestrian / cycleway through to the foreshore promenade.
- Casual viewing, picnic and children's play areas are provided sporadically throughout the site.
- A pedestrian / cycle bridge will be constructed over Browns Creek to create a link along the Manning River to the CBD.
- It is proposed to extend the site to the west along the rail corridor to provide a pedestrian connection to Chatham Avenue.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
1A	1 230	2.0:1	3 Storeys	10 + R	Residential	6m from Eastern Boundary	Medium-Low Density
1B	2 340	1.5:1	3 Storeys	10 + R	Residential	6m from Eastern + Western Boundary	Medium-Low Density
1C	2 150	1.5:1	3 Storeys	10 + R	Residential	6m from Eastern + Western Boundary	Medium-Low Density
1D	1 620	2.0:1	3 Storeys	10 + R	Residential	6m from Western Boundary	Medium-Low Density
1E	615	2.0:1	2 Storeys	8.5 + R	Residential with associated marina berths	No setbacks from boundary	Medium-Low Density

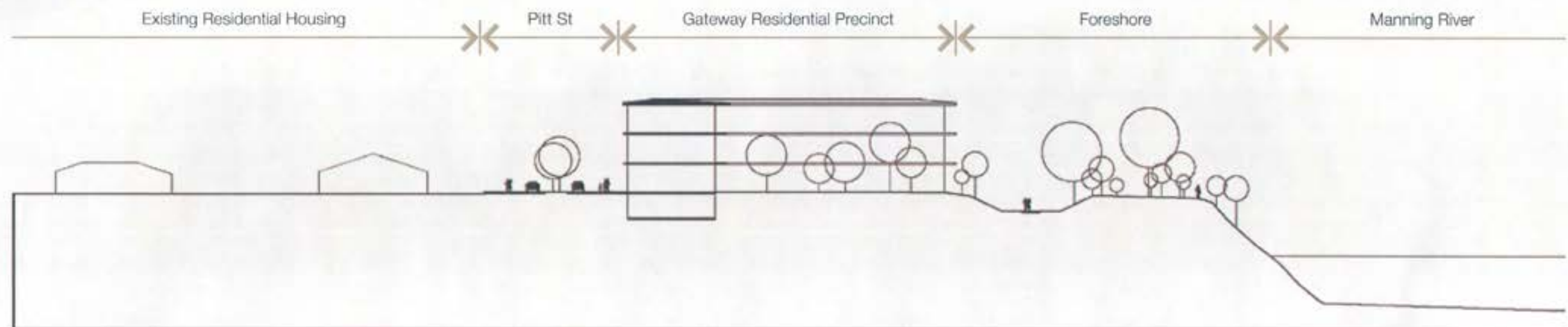
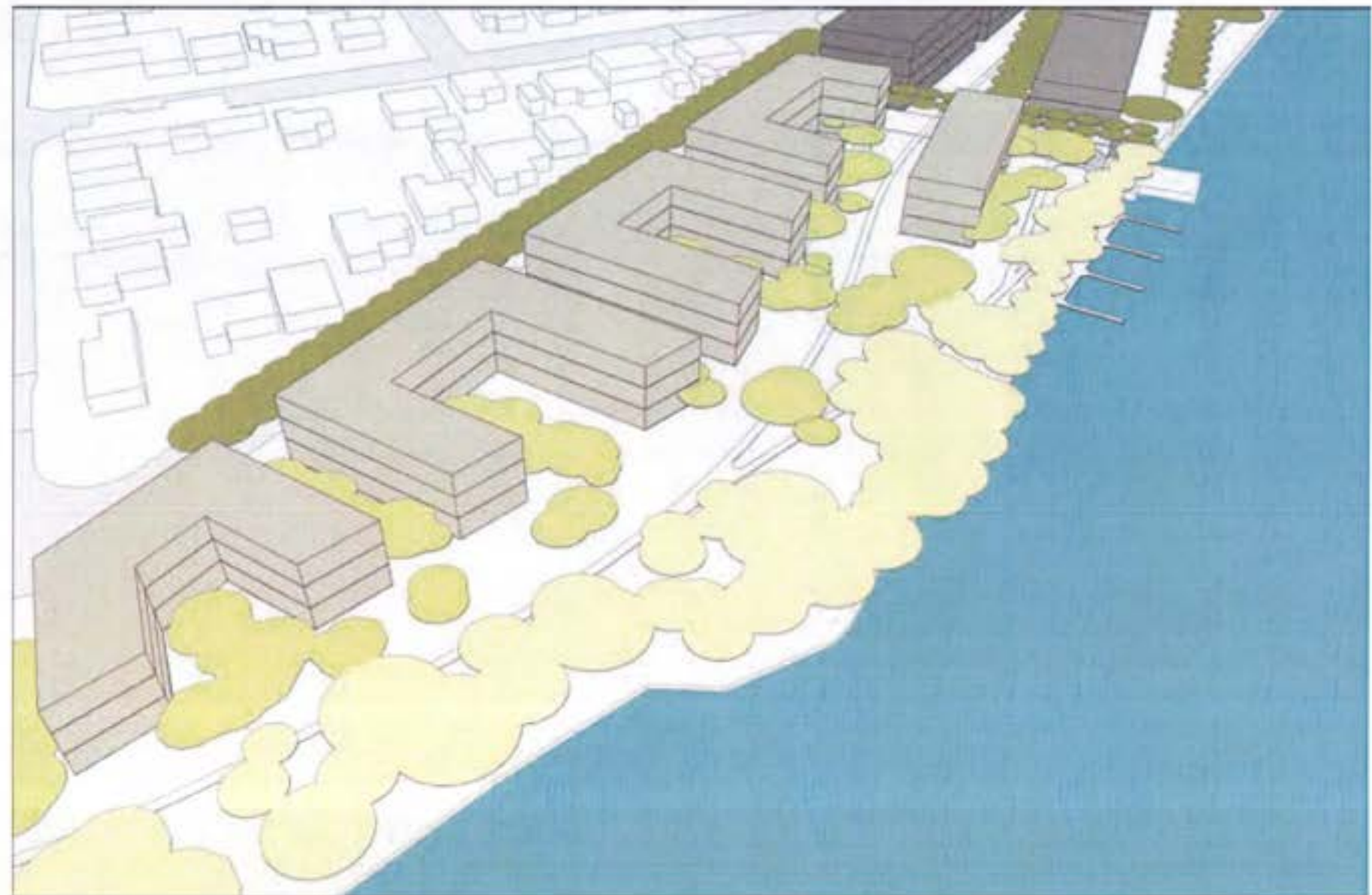


Suggested Building Envelope

Height Limit + Form

Key

-  Residential - Low Density
-  Residential - Medium-Low Density
-  Residential - Medium-High Density
-  Mixed Use
-  Commercial
-  Heritage Adaptive Reuse





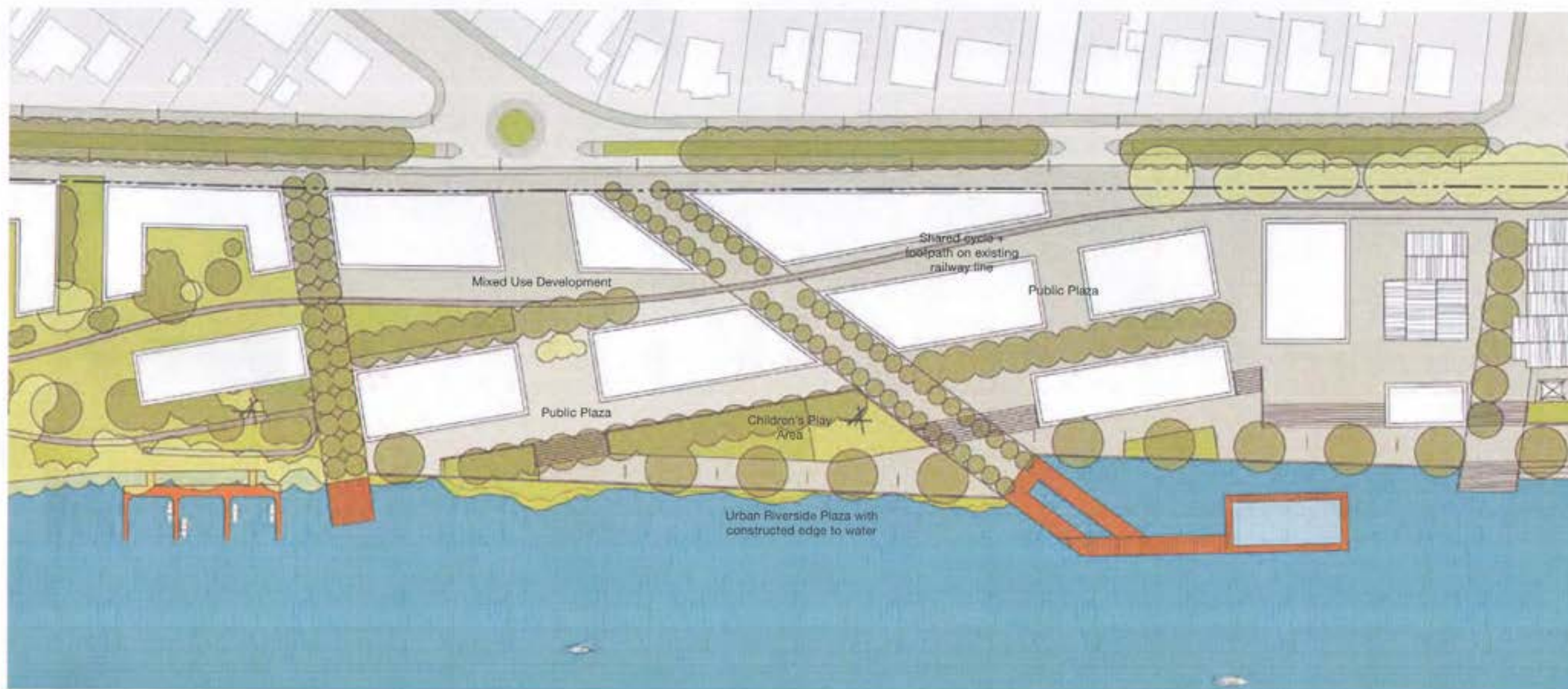
Artist's Impression



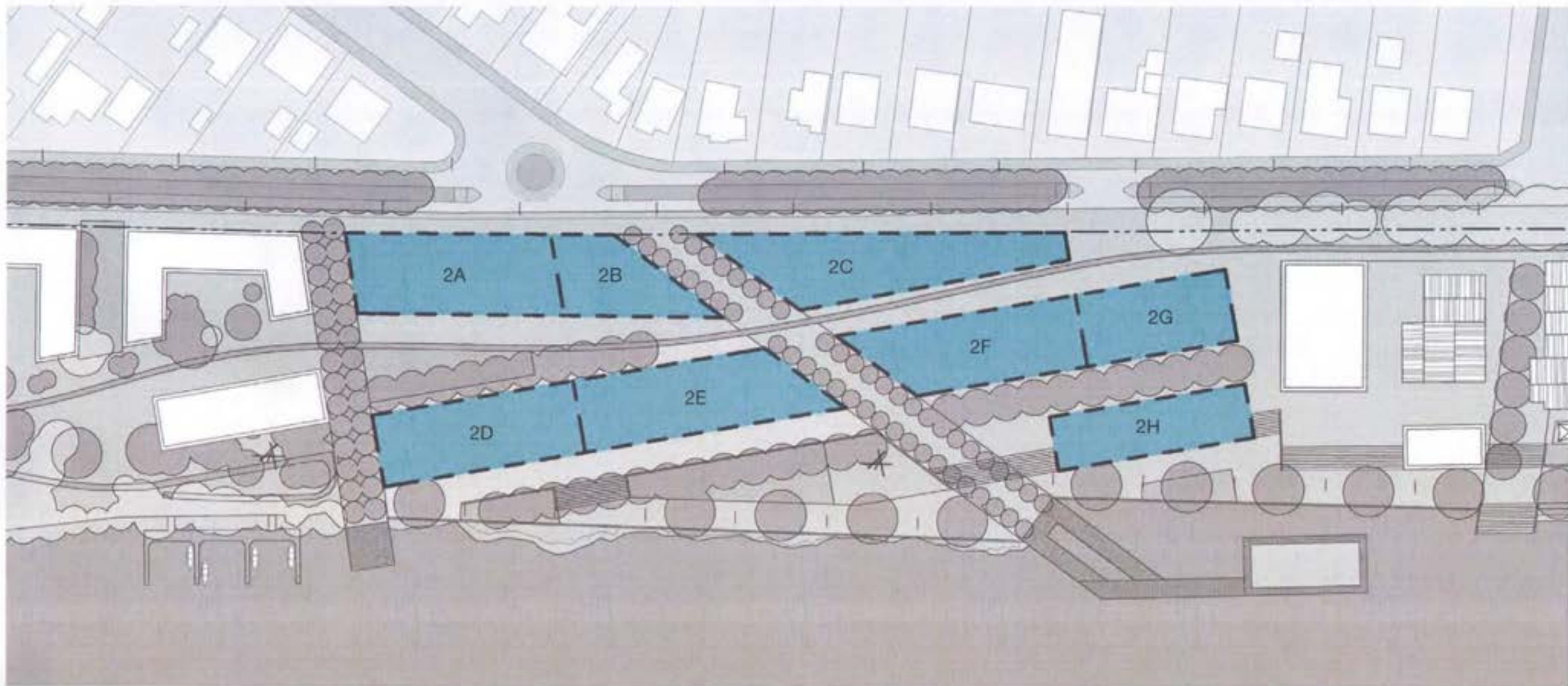
07.3 Figtree Commercial Precinct

The business hub of the proposal, this precinct incorporates mixed uses including high quality and speciality restaurants and cafes opening out to the terraced public domain areas. Commercial office is Green Star rated with professional residences over. Accommodated in buildings ranging from three storeys to a maximum of five storeys in height this precinct provides a public plaza containing external seating and dining areas as well as selective landscaping and terraced paving which activates the hard edged urban waterfront.





- The park character turns into a more urban promenade along the water edge and its adjacent heritage buildings.
- Construct urban riverside plaza and provide external seating and dining areas and plant trees to create a pleasant environment.
- Commercial building opportunities.
- Connection to fibre optic cable in Pitt Street.
- Jobs for new/existing residents especially as home-based occupations and separate lifestyle.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
2A	1 250	2.5:1	4 Storeys	15.6 + R	Mixed Use	10m from Eastern Boundary	Medium Density
2B	700	2.0:1	4 Storeys	15.6 + R	Mixed Use	10m from Western Boundary	Medium Density
2C	1 360	4.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Medium Density
2D	1 125	2.5:1	3 Storeys	11 + R	Mixed Use	10m from Eastern Boundary	Medium Density
2E	1 265	2.5:1	3 Storeys	11 + R	Mixed Use	10m from Western Boundary	Medium Density
2F	1 150	3.0:1	4 Storeys	15.6 + R	Commercial	6m from Eastern Boundary	Medium Density
2G	840	3.0:1	4 Storeys	15.6 + R	Commercial	6m from Western Boundary	Medium Density
2H	820	3.0:1	3 Storeys	11 + R	Mixed Use	No setbacks from boundary	Medium Density

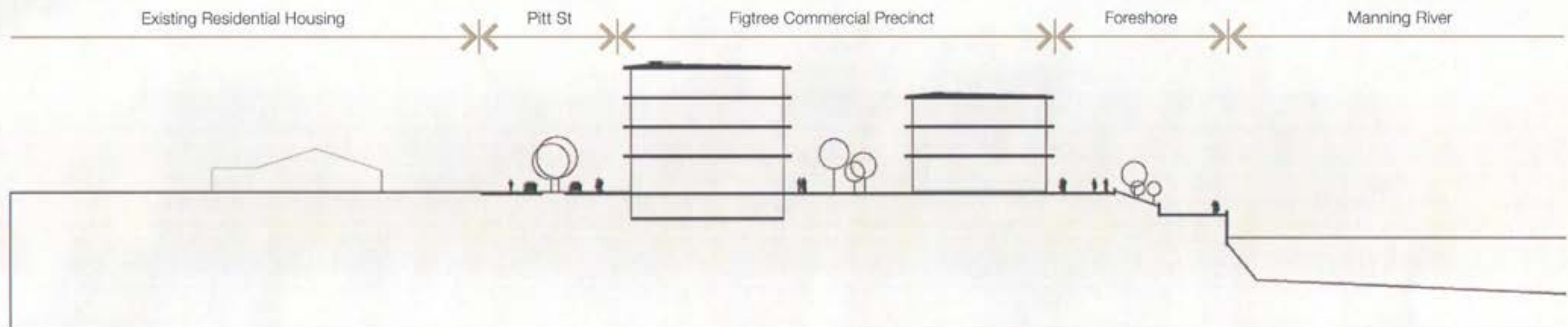


Suggested Building Envelope

Height Limit + Form

Key

-  Residential - Low Density
-  Residential - Medium-Low Density
-  Residential - Medium-High Density
-  Mixed Use
-  Commercial
-  Heritage Adaptive Reuse



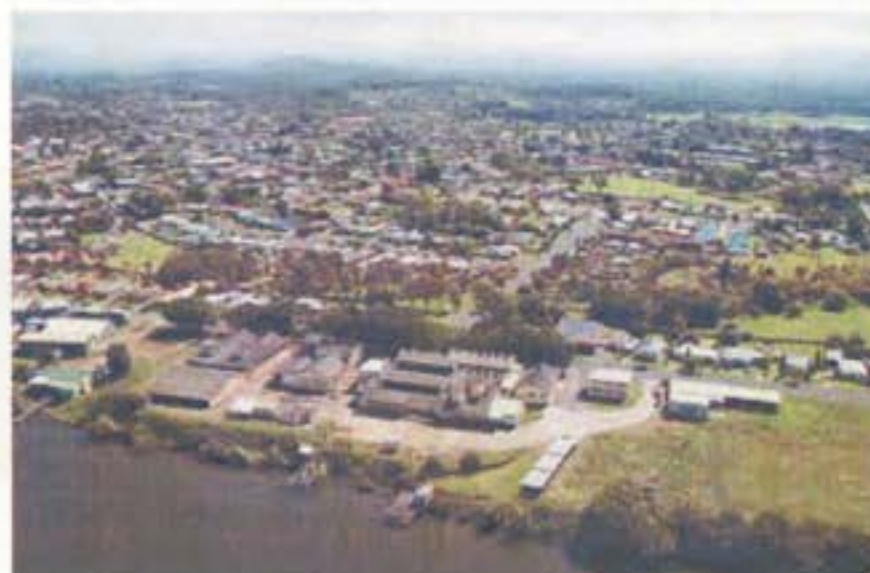


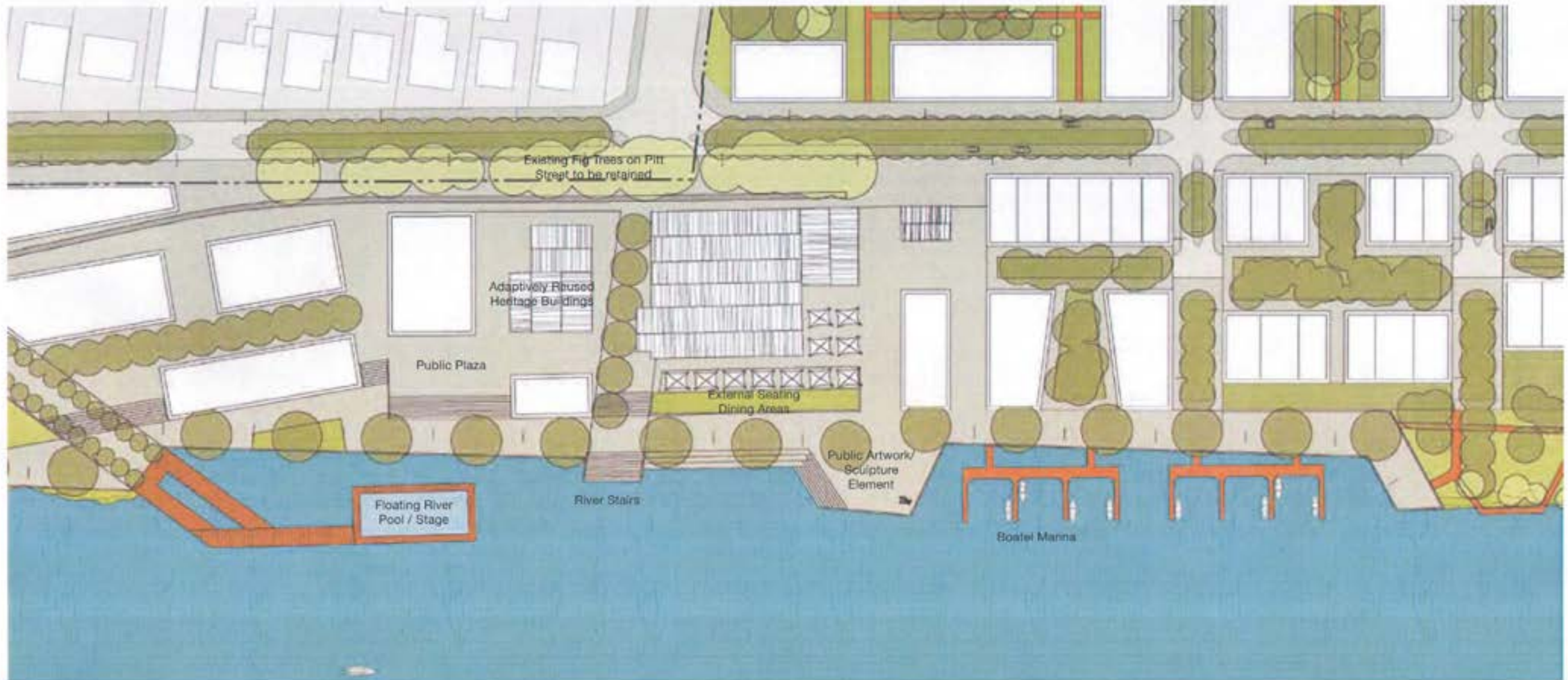
FIGTREES ON THE MANNING
LOCAL AREA PLAN / MASTERPLAN



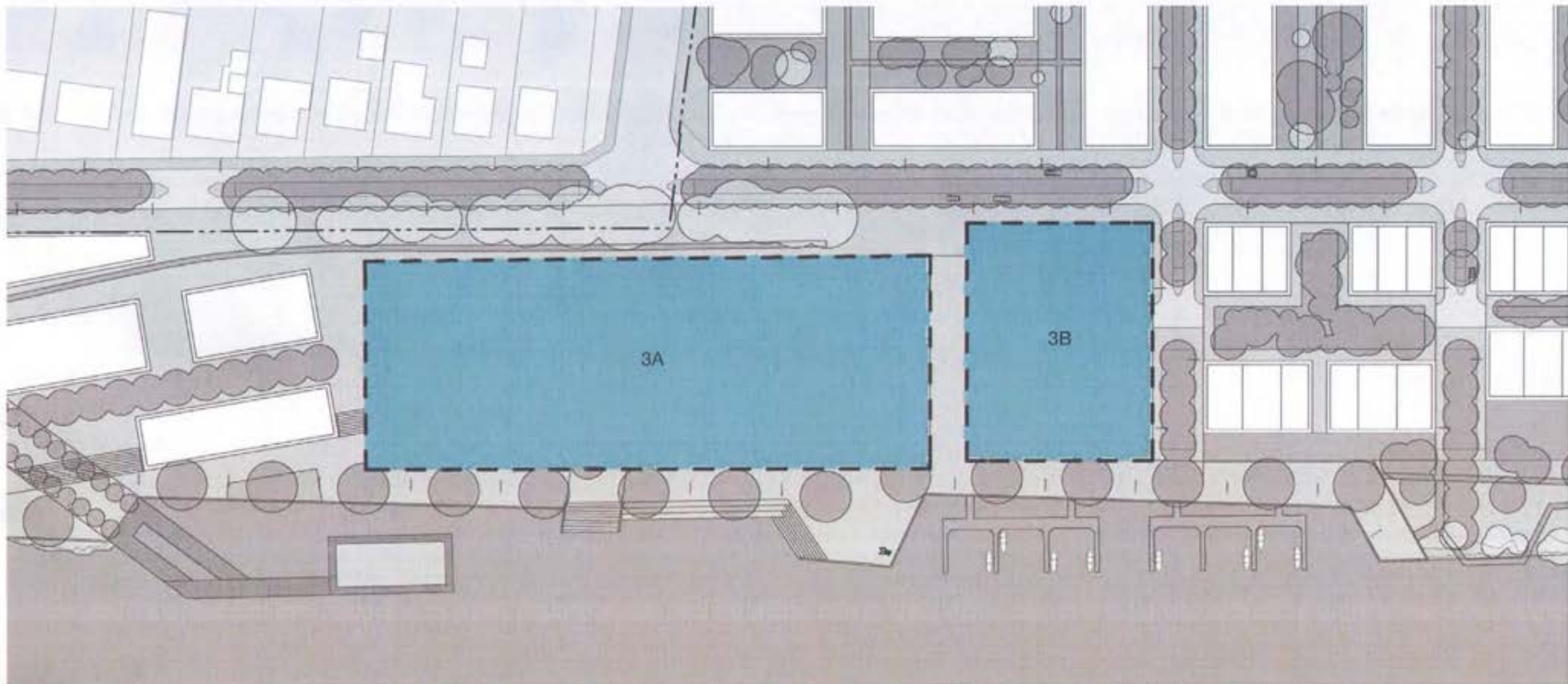
07.4 The Dairy Heritage Precinct

The Dairy Heritage Precinct is a heritage enclave with a mixture of new and existing buildings and in particular refurbishment of the unique heritage buildings with an appropriate adaptive reuse function to activate sheds and public open spaces. Primary uses of this area could include multipurpose cultural and educational facilities, taverns, restaurants, fish co-op, fresh produce markets, community facilities, museum and potential hotel and conference facilities. The variation of external spaces and landscaping strategies will generate an active precinct. The public pontoon and pool / stage is the major public domain feature. An extension of the pedestrian walk and a great place to enjoy a riverside swim or performance. Bulk and scale of built form does not exceed the existing heritage building fabric.





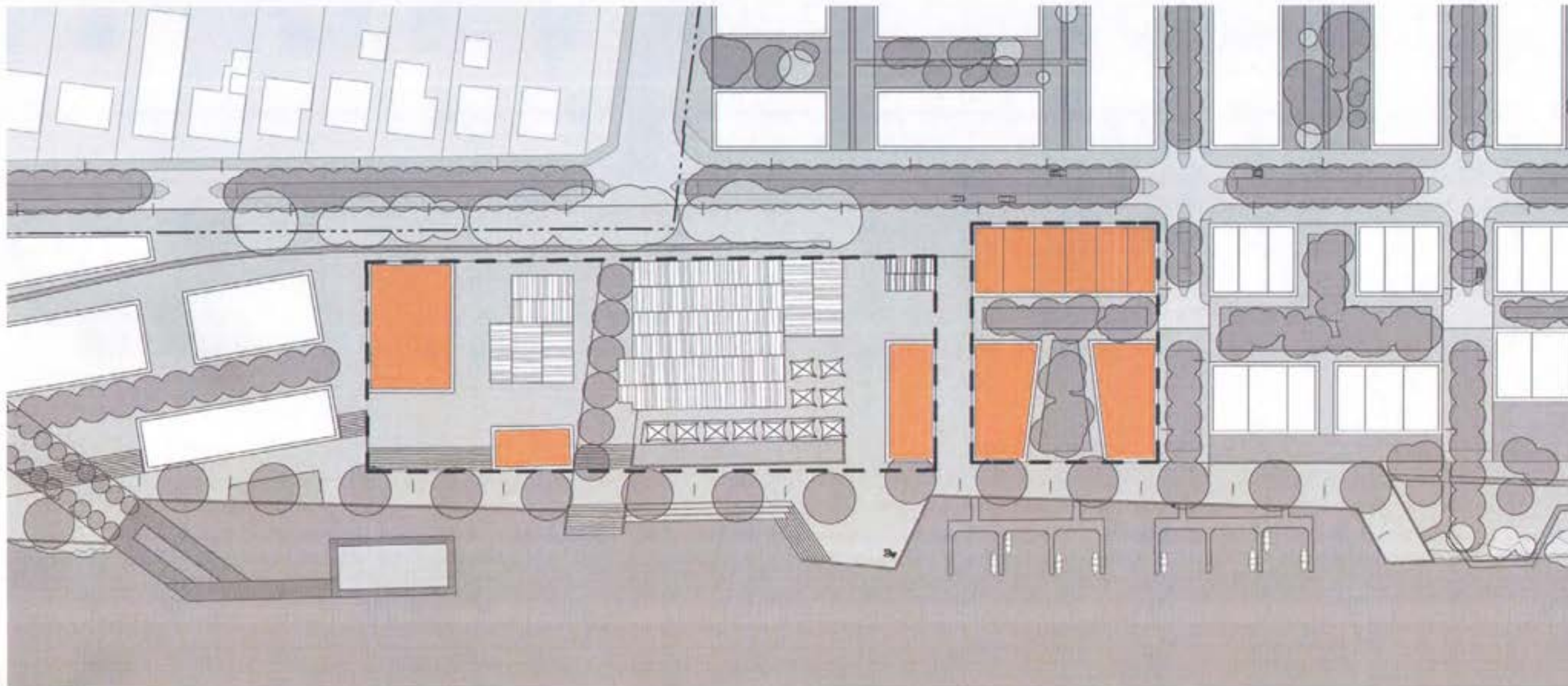
- Adaptive reuse of the unique heritage buildings using potential gaps in the Taree infrastructure such as: art, family market, organic market, local farmers market, high quality and speciality restaurants, hotel/motel, business incubation, reception facilities, function space and child care.
- The interaction with the water will be enhanced through the construction of viewing platforms, floating jetties, floating river pool/ stage and river stairs.
- Open up the buildings towards the river and the public open spaces to encourage people to interact, meet and relax in the heritage precinct.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
3A	9 100	0.75:1	2 Storeys	6.6 + R / 8.5 + R	Commercial / Adaptive Reuse	No setbacks from boundary	Residential Medium-Low Density / Commercial
3B	3 360	2.0:1	3 Storeys	11 + R	Mixed Use	No setbacks from boundary	Commercial

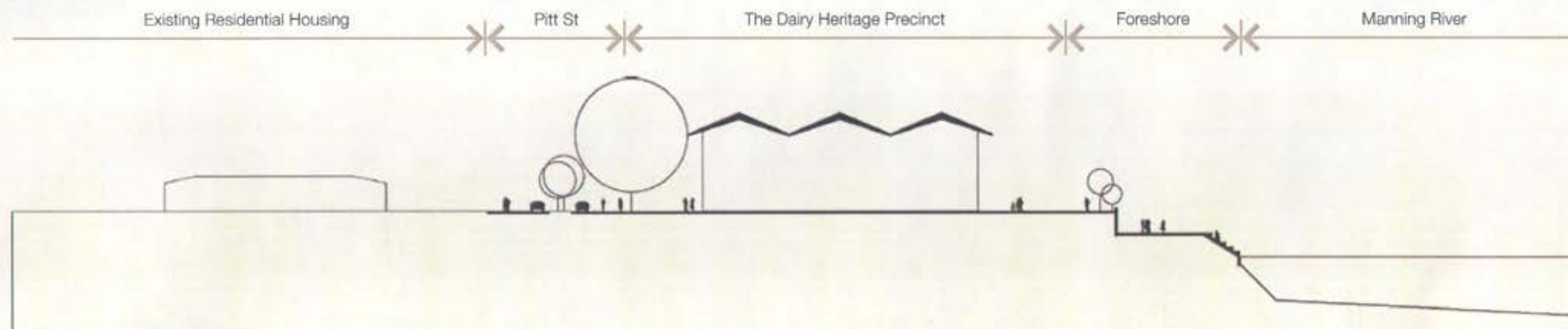


Suggested Building Envelope

Height Limit + Form

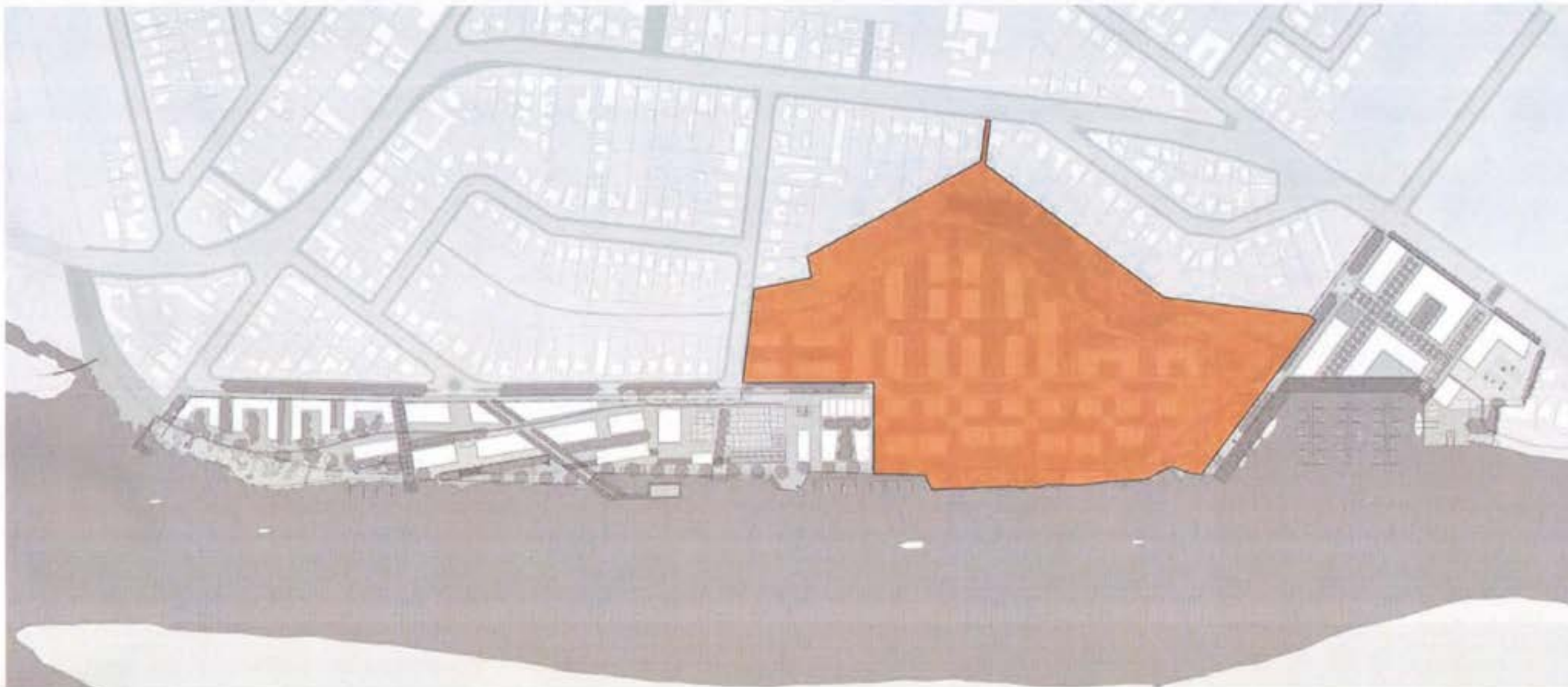
Key

-  Residential - Low Density
-  Residential - Medium-Low Density
-  Residential - Medium-High Density
-  Mixed Use
-  Commercial
-  Heritage Adaptive Reuse





FIGTREES ON THE MANNING
LOCAL AREA PLAN / MASTERPLAN



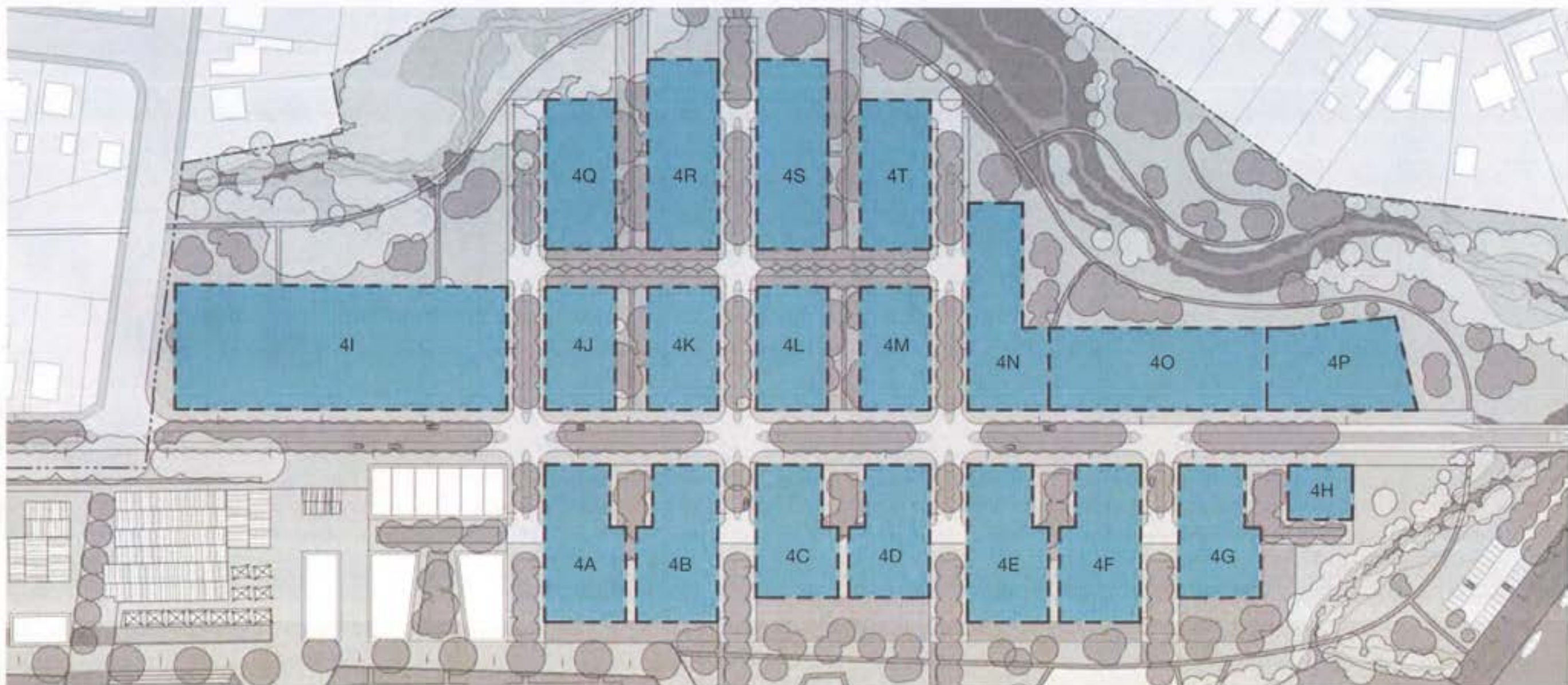
07.5 Riverpark Village Precinct

The Riverpark Village Precinct is a residential village which proposes an assorted number of dwellings, with a mixture of residential types including medium density, integrated housing and apartments. The concept framework for the residential area is proposed as a flexible approach to allow for a range of residential development types including some mixed use and home based business. Nestled between the existing creek, vegetation and riverside, the structure allows building frontage to enjoy a landscaped aspect with a variety of panoramic and glimpse views of the river. Lookout nodes are connected to a boardwalk between existing riverside vegetation. The built form is predominantly two to three storeys with some loft spaces towards the northern fringe to take advantage of the fantastic views.





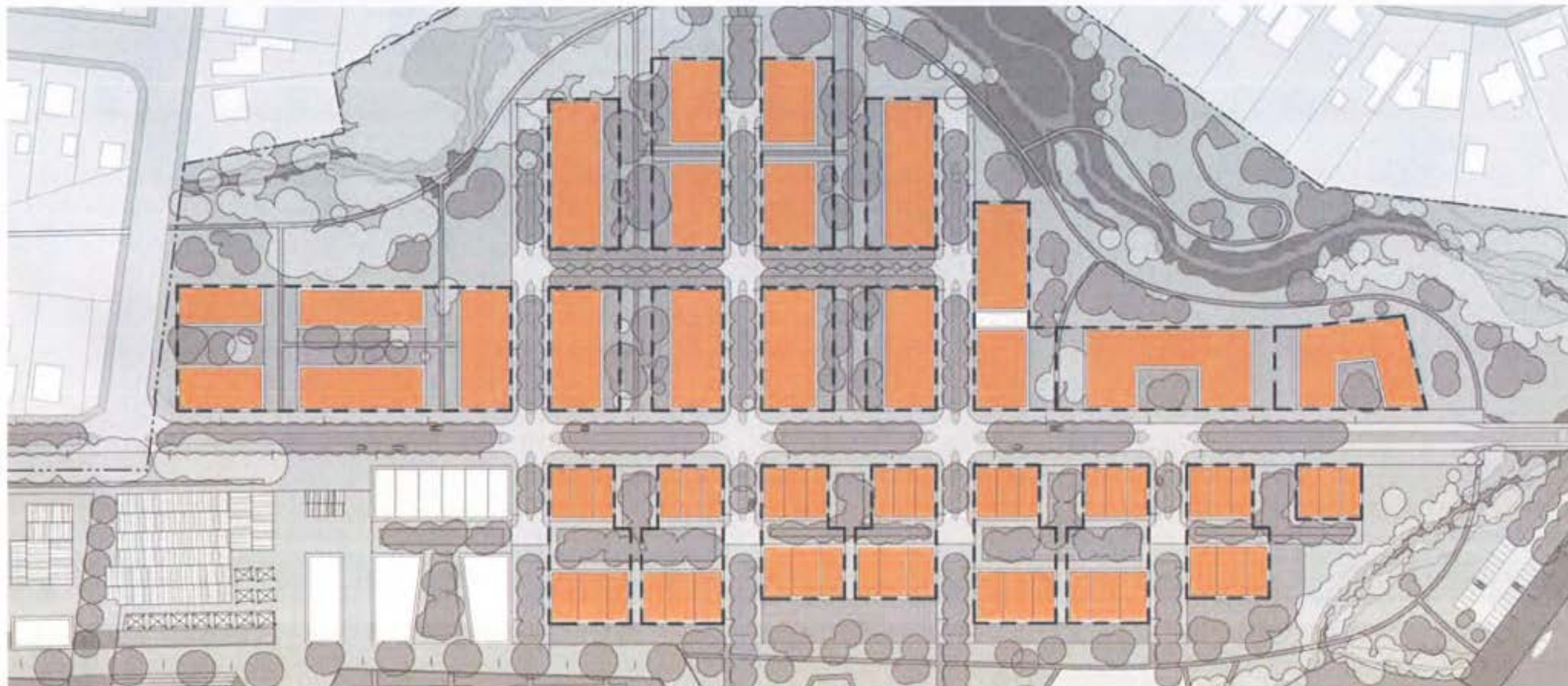
- The residential village, located in between the scenic existing landscape elements, creek & river, is a place where people want to live.
- The use of locally endemic vegetation will enhance the natural environment.
- Water sensitive urban design will reinforce the sensitive and sustainable ecology of the site.
- A public beach at the river's edge provides a place for recreation and social use.
- Raised boardwalks and bridges along the river and creek will connect the Heritage Precinct with the Riverpark Village Precinct and the Marina Commercial Precinct.
- The Wetland Park provides a recreation space for the community. A boardwalk and path system is designed to enjoy different landscape elements such as water, wetland, trees and open grassland. Viewing points are located on natural peaks in the existing topography to overlook the park. Connections to Pioneer Street and Chatham Avenue will be created.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
4A / 4E	1 600	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4B / 4F	1 600	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4C / 4G	1 330	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4D	1 330	1.5:1	2/3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4H	480	3.0:1	3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low / Low Density
4I	5 550	2.0:1	3 Storeys	10 + R	Residential	No setbacks from boundary	Residential - Medium-Low Density
4J / 4K	1 170	2.0:1	3 Storeys	10 + R	Residential	6m from Eastern Boundary	Residential - Medium-Low Density
4L / 4M	1 170	2.0:1	3 Storeys	10 + R	Residential	6m from Western Boundary	Residential - Medium-Low Density



Suggested Building Envelope

Development Lots cont.

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
4N	1 820	2.0:1	3 Storeys	10 + R	Residential	10m from Eastern Boundary	Residential - Medium-Low Density
4O	2 400	2.0:1	3 Storeys	10 + R	Residential	10m / 8m from Western / Eastern Boundary	Residential - Medium-Low Density
4P	1 650	2.0:1	3 Storeys	10 + R	Residential	8m from Western Boundary	Residential - Medium-Low Density
4Q	1 430	3.0:1	4 Storeys	13.2 + R	Residential	6m from Eastern Boundary	Residential - Medium-High Density
4R	1 820	3.5:1	5 Storeys	17.5 + R	Residential	6m from Western Boundary	Residential - Medium-High Density
4S	1 820	3.5:1	5 Storeys	17.5 + R	Residential	6m from Eastern Boundary	Residential - Medium-High Density
4T	1 430	3.0:1	4 Storeys	13.2 + R	Residential	6m from Western Boundary	Residential - Medium-High Density

Height Limit + Form

Key

-  Residential - Low Density
-  Residential - Medium-Low Density
-  Residential - Medium-High Density
-  Mixed Use
-  Commercial
-  Heritage Adaptive Reuse



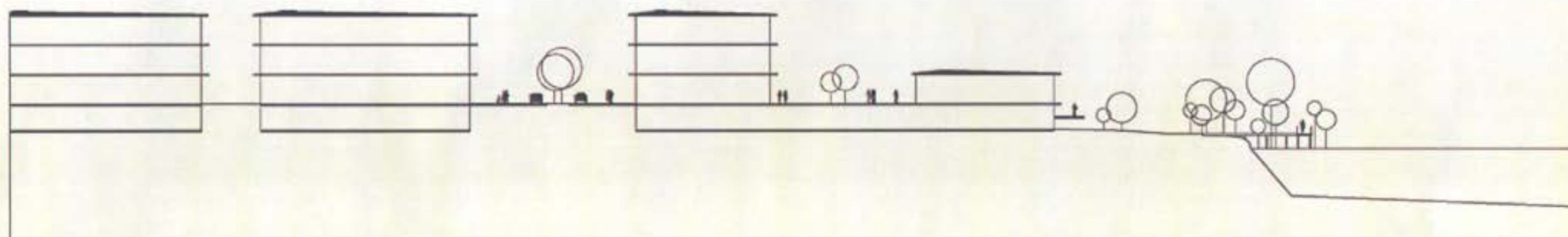
Riverpark Village Precinct

Pitt St

Riverpark Village Precinct

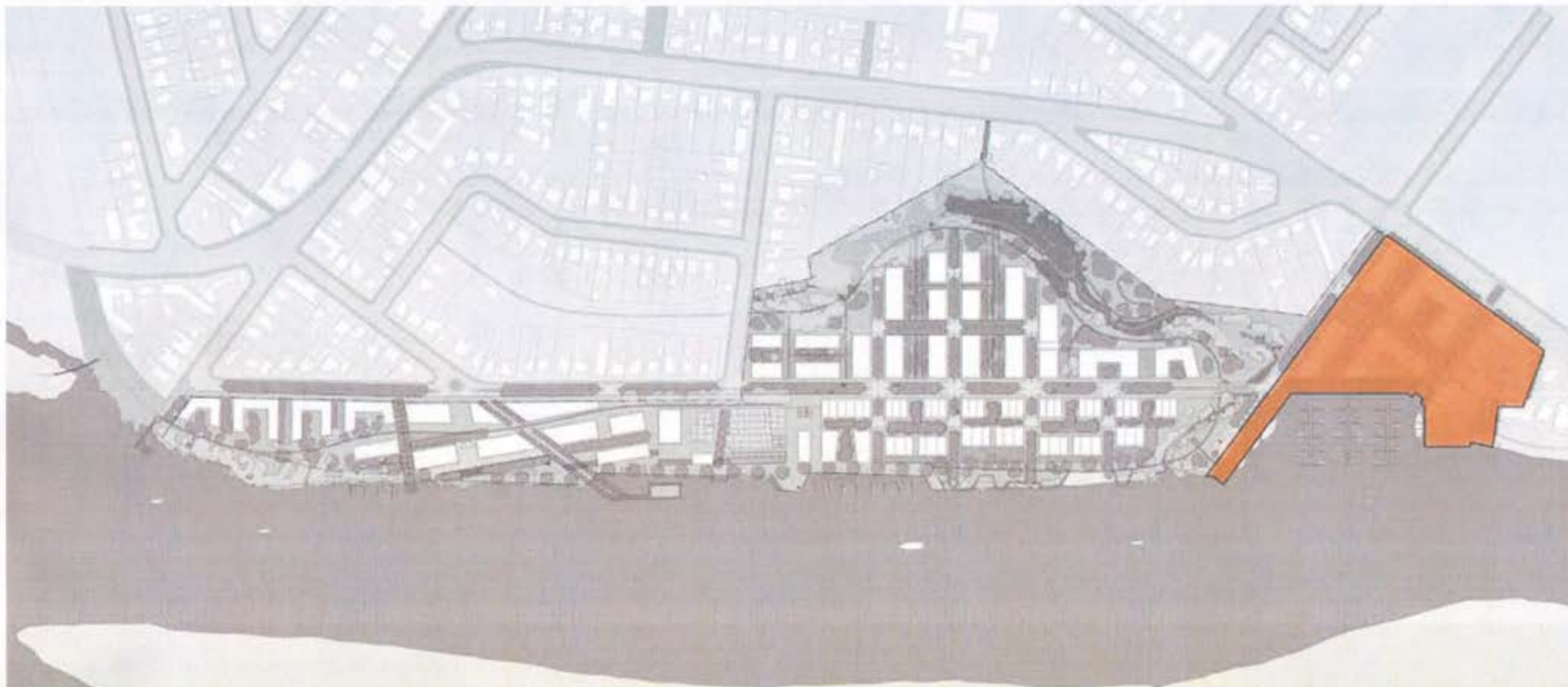
Foreshore

Manning River





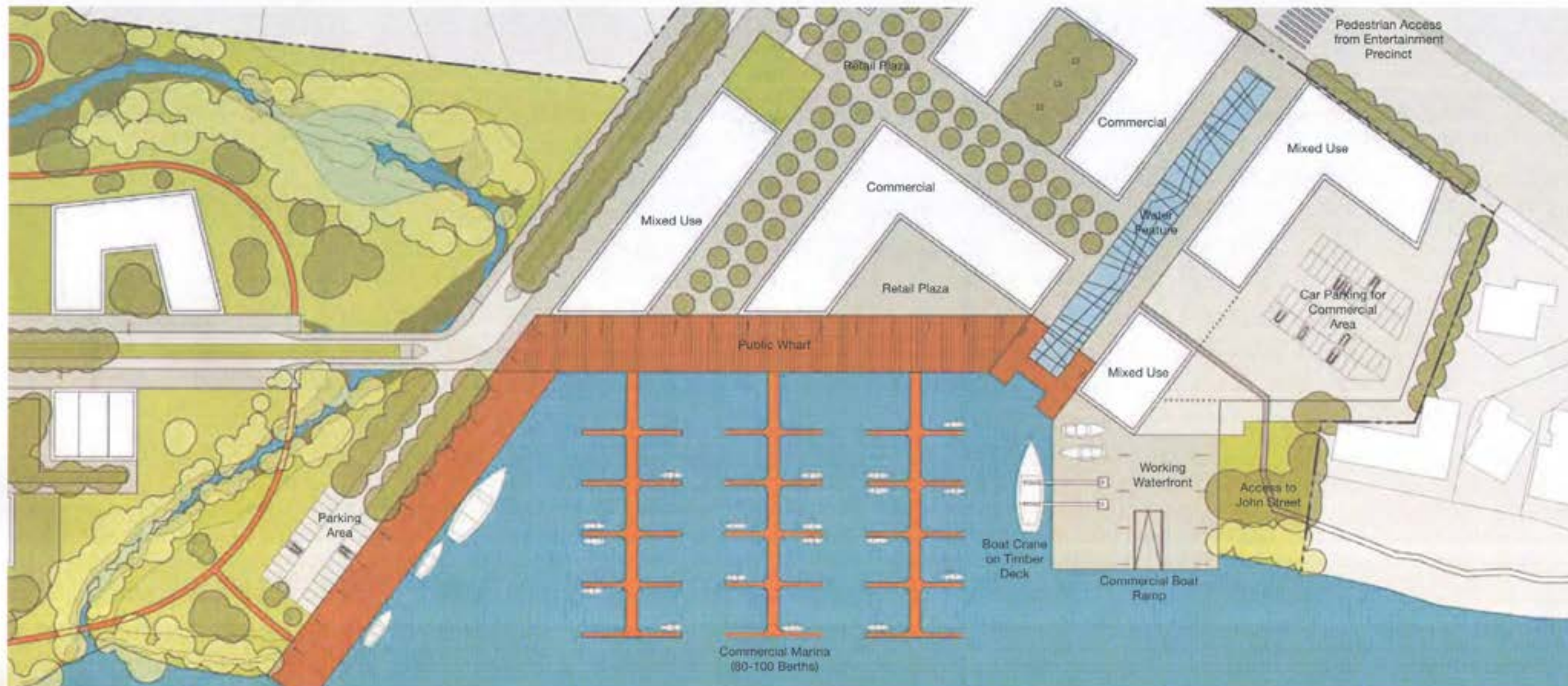
FIGTREES ON THE MANNING
LOCAL AREA PLAN / MASTERPLAN



07.6 Marina Commercial Precinct

The Marina Commercial Precinct is a commercial/mixed use centre with a dual frontage to the main road, it forms the eastern gateway to Taree and to the marina and Manning River. Cutting into the riverside to create a protected marina environment provides a significant commercial opportunity. A built form of up to four storeys would be encouraged in the commercial centre with the potential for an iconic gateway landmark. Public access through the site to the Entertainment / Sports and Recreation Precinct to the north and along the Manning River to the east will be included.





- Working waterfront is the character of the marina. It is a commercial and recreational precinct.
- Establish first in existing buildings and later in new buildings a range of uses such as administration for sailing/yachts/house boats/fishing and whale watching tours, fitness club, cycling centre yoga/health and lifestyle centre.
- Establish a marina with facilities such as: landing stage, maintenance areas, dry dock, dry storage and boat building facility on the big oyster site.
- A water feature from the east provides the gateway to the site and guides pedestrians from Chatham Avenue to the marina and the Manning River.
- Access around the commercial marina site ensures continuity of public access along the waterfront.



Development Lots

R = Roof and loft space

Lot	Area (m ²)	FSR	Height	Max Height (m above natural ground)	Permissible Uses	Setbacks	Density
5A	1 480	3.0:1	3 Storeys	12 + R	Commercial	No setbacks from boundary	Mixed Use
5B	1 210	3.0:1	3 Storeys	12 + R	Mixed Use	No setbacks from boundary	Mixed Use
5C	3 800	3.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Commercial
5D	2 800	3.0:1	4 Storeys	15.6 + R	Commercial	No setbacks from boundary	Commercial
5E	7 380	1.0:1	2 Storeys	12 + R	Mixed Use	No setbacks from boundary	Mixed Use
5F	-	-	-	-	Commercial Marina	No setbacks from boundary	-

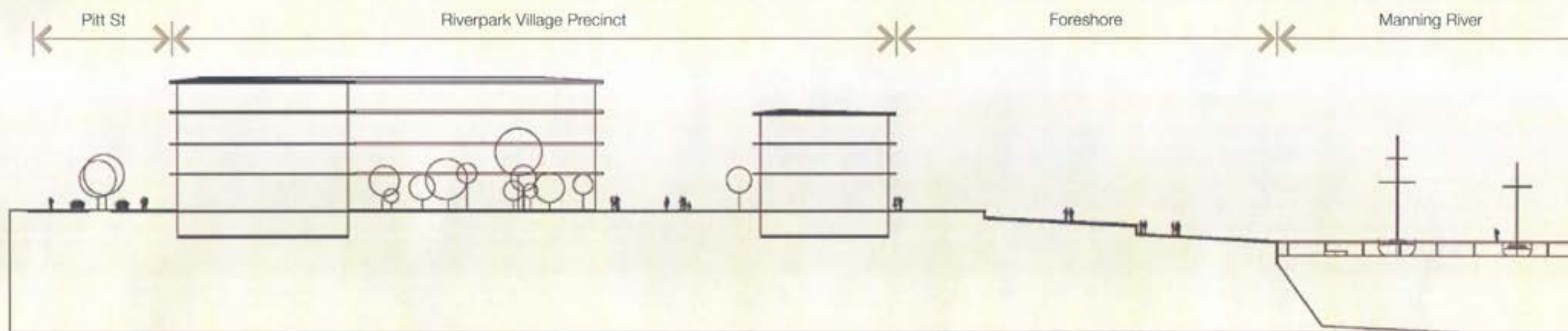
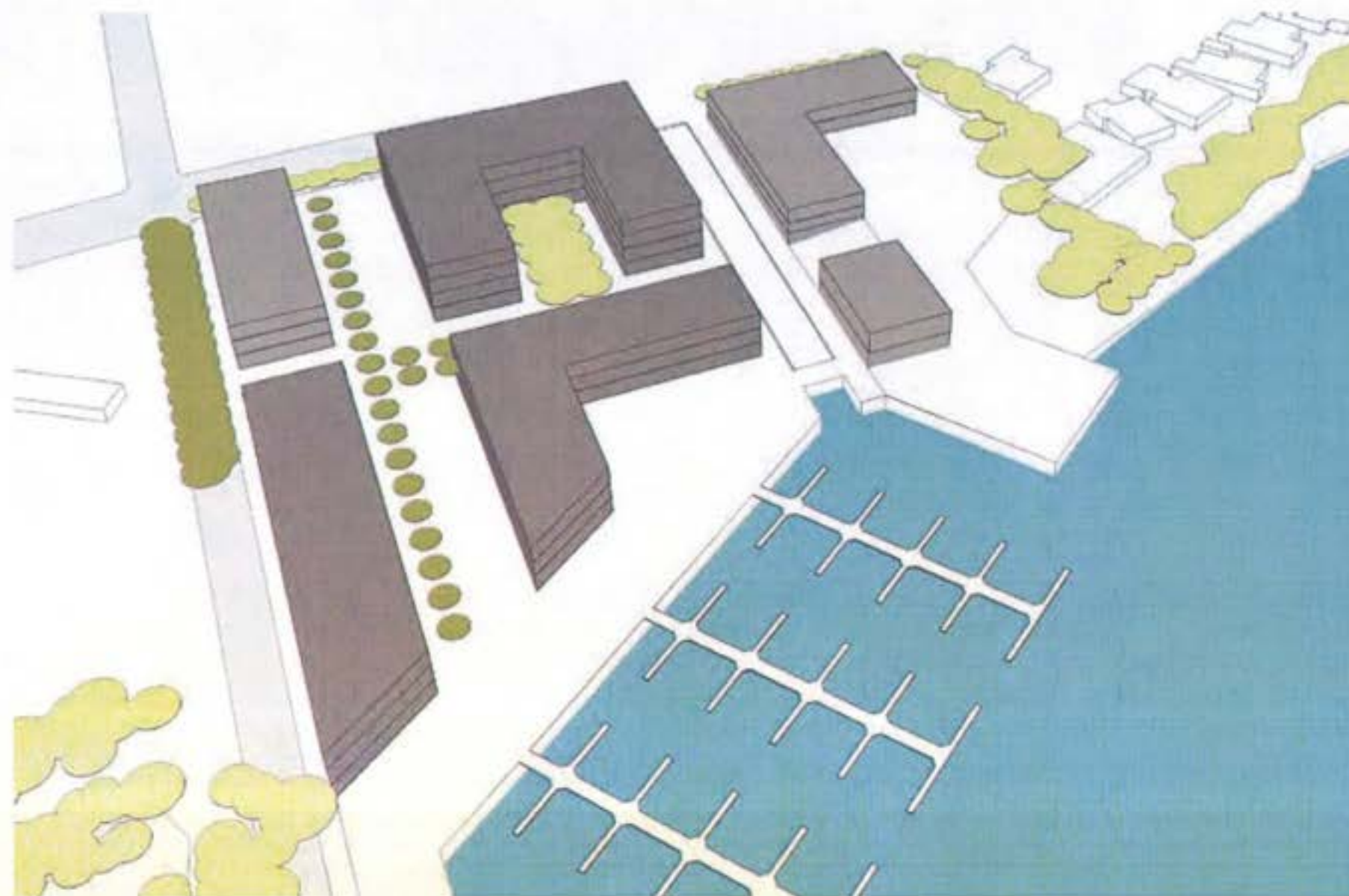


Suggested Building Envelope

Height Limit + Built Form

Key

-  Residential - Low Density
-  Residential - Medium-Low Density
-  Residential - Medium-High Density
-  Mixed Use
-  Commercial
-  Heritage Adaptive Reuse





FIGTREES ON THE MANNING
LOCAL AREA PLAN / MASTERPLAN

08. PERFORMANCE MEASURES

08.1 Development Controls

08.1.1 Existing Controls

Development is regulated by multiple layers of planning controls but not all controls apply to all developments. Council must assess proposals against all relevant planning controls.

Each development proposal will have its own regulatory niche. Planning controls undergo regular revision and updating so attempting to specify applicable controls in advance can be misleading. The advice of Council should be sought for each individual Figtrees on the Manning development proposal prior to commencing design.

Broadly the regulatory context is as set out below. Each level can contain relevant controls.

- Commonwealth legislation
- Ministerial directions
- NSW Environmental Planning and Assessment Act 1979 and regulations
- State Environmental Planning Policies
- Regional Strategies
- Regional Environmental Plans (although these may soon be redundant)
- Local Environmental Plan
- Development Control Plan (DCP)
- Developer Contributions plans
- Local policies such as master plans and area plans

This section of the document sets out Council's expectations for individual developments within the Figtrees area. It will also be necessary to comply with all the other relevant controls applying at the time.

Any variations to the DCP controls referred to in this document will need to be in accordance with the procedures and information requirements of the DCP. Any variations will need to be justified as part of a Development Application (DA) submission. Any conflicts between the Masterplan and Council's DCP requirements should be resolved in favour of the Masterplan.

08.1.2 Compliance with the Masterplan

Council has adopted the Suters Architects and s_Lab Masterplan for the Figtrees on the Manning area. Development applications will need to comply with the requirements of the Masterplan. Council will consider variations to the Masterplan provisions but only if justified by an appropriate study.

The Figtrees on the Manning will be developed under the design principles and standards established by the Masterplan.

Design Panel Process

- Panel of experts to be formed to review development proposals.
- The panel will review plans and advise Council on quality of proposed designs.
- A registered architect must be appointed by an applicant to carry out designs in order to lodge a Development Application within the Figtrees on the Manning precinct for the construction or alteration of any building.

Urban Design

Each development proposal will need to address the urban design principles set out in Section 05 of the Masterplan.

- Visual Connections
- Preserving + Integrating Public Buildings + Spaces
- Natural Domain
- Defining Main Street + Gateways + Pedestrian / Cycleways
- Defining Public Spaces
- Traffic

Land Use

Each development proposal will need to comply with the land use requirements set out in Section 06 of the Masterplan.

- Land Uses as specified
 - Plaza + Paving
 - Landscape
 - Boardwalk
 - Existing Trees + Vegetation
 - Proposed Trees + Vegetation
 - Road Network
 - Basement + On Road Car Parking

Character Precinct Controls

Each development proposal will need to comply with the land use requirements set out in Section 07 of the Masterplan.

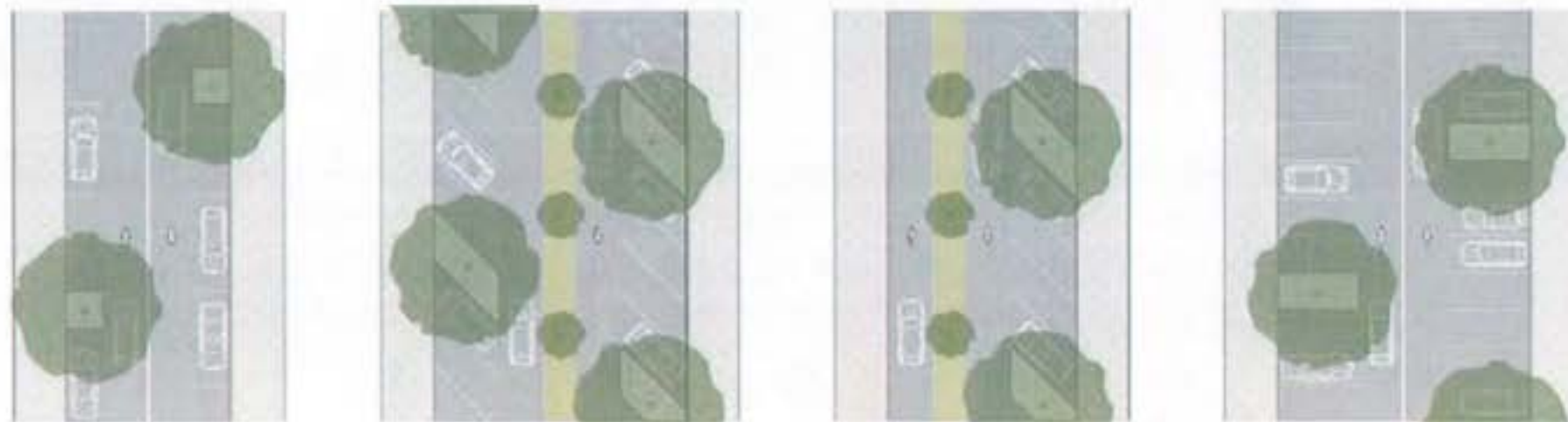
Building envelopes are to be justified through site and design analysis.

- Precinct Objectives
- Lot Controls
 - FSR
 - Height Storeys
 - Height from Natural Ground Level
 - Permissible Uses
 - Setbacks
 - Density / Form
- Suggested Building Envelopes

08.02 Car Parking

Adequate off-street car parking is to be provided in accordance with Part G of the Draft Greater Taree Development Control Plan 2008. The Masterplan provides for underground parking areas to be provided within the proposed building envelopes.

Traffic generation assessments have been undertaken by Connell Wagner as part of the Masterplan process which form the basis for certain intersection treatments and access arrangements to service the proposed future development under the Masterplan. These traffic assessments should be taken into consideration at the time of individual development to determine traffic generation is consistent with the traffic assessments.



Pitt Street Upgrade

A unique opportunity exists to upgrade Pitt Street to provide a pedestrian friendly tree lined boulevard which minimises vehicle traffic but promotes connectivity and interaction with the community. A number of pedestrian islands and traffic calming devices are to

be installed to manage traffic flow and ensure a pedestrian friendly environment is actively promoted during development of the site ensuring connection between character areas and the surrounding community.

Traffic Generation Assessment

Precinct	Classification	Area	Dwellings / Rooms	Assumed Daily Rate	Traffic Generated	Assumed Peak Rate	Base Peak	Site Discount	Discounted Peak	Week Day AM Incoming	Week Day AM Outgoing	Week Day PM Incoming	Week Day PM Outgoing	Saturday Morning Incoming	Saturday Morning Outgoing	Sunday Afternoon Incoming	Sunday Afternoon Outgoing
Gateway Residential Precinct	HO Residential	12435	164	4 / dwelling	415	0.7	73	20%	58	10	39	30	10	5	15	15	5
Gateway Residential Precinct	Mixed Use	2450		4 / 100m ²	96	0.8 / 100m ²	20	20%	16	12	4	4	12	20	9	9	20
Figtree Commercial Precinct	Mixed Use	8323		4 / 100m ²	333	0.8 / 100m ²	67	20%	53	34	19	10	34	60	27	27	60
Figtree Commercial Precinct	Commercial	17415		8 / 100m ²	497	2 / 100m ²	139	40%	84	120	50	50	120	60	34	34	60
The Dairy Heritage Precinct	Residential - Adaptive Re-use	5460	30	4 / dwelling	219	0.3	9	0%	9	5	0	0	5	20	5	5	20
The Dairy Heritage Precinct	Commercial	5712		8 / 100m ²	228	2 / 100m ²	46	0%	46	10	0	0	10	42	15	15	42
Riverside Residential Precinct	HO Residential	15105	84	4 / dwelling	336	0.3	25	20%	20	2	6	6	2	1	3	3	1
Riverside Residential Precinct	HO Residential	32900	273	4 / dwelling	1093	0.7	191	20%	153	29	99	30	29	15	45	45	15
Riverside Residential Precinct	HO Residential	21320	118	4 / dwelling	474	0.7	83	20%	66	8	39	30	8	4	15	15	4
Marina Commercial Precinct	Mixed Use	14712		4 / 100m ²	588	0.6 / 100m ²	118	40%	71	300	64	44	300	150	30	30	150
Marina Commercial Precinct	Commercial	19900		8 / 100m ²	1592	2 / 100m ²	159	0%	159	10	6	6	10	46	20	20	46
Base Daily Generation					6373		929		735	540	292	292	540	423	208	208	423
Discounted Daily Generation					5005												
Assumptions										Directional Split							
HO Units / Apartments										Taree CSO / Taree West		65%	351	190	190	351	275
HO Dwellings / Townhouses										Taree North		25%	135	73	73	135	106
										Cheriton / Cundletown		10%	54	29	29	54	42
													540	292	292	540	423
										Intersection 1							
										Left Out / Right In		132	122	122	132		
										Right out / Left In		40	40	40	40		
										Intersection 2							
										Left Out / Right In		42	32	32	42		
										Right out / Left In		4	22	22	4		
										Intersection 3							
										Left Out / Right In		279	45	45	279	176	45
										Right out / Left In		31	7	7	31	20	5
												528	288	288	528	196	58



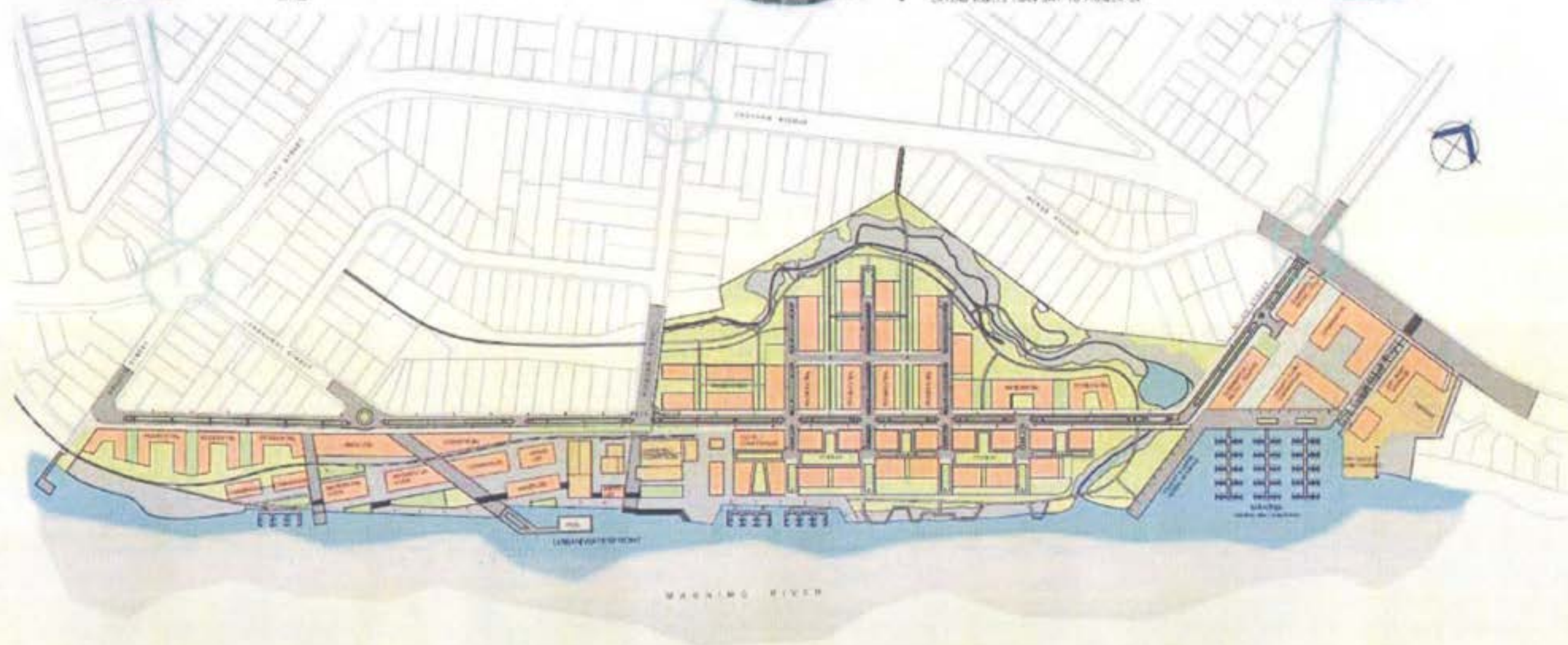
- INTERSECTION HAVELock ST / LYMBURST ST**
- NEW TRAFFIC CONTROL SIGNALS
 - RATIONALISE / CLOSE NELSON ST, RETAIN AS LEFT BUT ONLY
 - PROVIDE RIGHT TURN BAY, DEDICATED PHASE TO LYMBURST STREET



- INTERSECTION LYNBURN AVE / PIONEER ST**
- MODIFY EXISTING TRAFFIC CONTROL SIGNALS
 - EXTEND RIGHTS TURN BAY TO PIONEER ST



- INTERSECTION LYNBURN AVE / BLIGH ST**
- NEW TRAFFIC CONTROL SIGNALS
 - EXTEND RIGHT TURN BAY TO BLIGH STREET
 - POSSIBLE IMPACT ON RIGHT TURN BAY TO COWPER ST



- LEGEND**
- MAJOR TURNING MOVEMENTS
 - MINOR TURNING MOVEMENTS

- TRAFFIC VOLUME AND GENERATION**
- PREVIOUS DAILY TRAFFIC ON OLD PALFRE HIGHWAY ESTIMATED 2500 VPD IN 1998
 - PRIOR TO OPENING OF TARGE BYPASS
 - ESTIMATED DAILY TRAFFIC VOLUMES ON OLD PALFRE HIGHWAY IS CURRENTLY 1800 VPD
 - TOTAL ESTIMATED DAILY TRAFFIC GENERATION IS UP TO 9000 VPD
 - APPLICATION OF SITE BUSINESS DESIRE DAILY GENERATION TO 4000 VPD
 - DAILY PEAK GENERATION UP TO 300 VEHICLES PER HOUR
 - PROPOSE TO MODIFY EXISTING INTERSECTIONS AS SHOWN

Civil Traffic Generation Plan

08.3 Landscaping

Part G2 of the Draft Greater Taree Development Control Plan 2008 provides landscaping requirements for development sites including the provision for a landscaping plan to be submitted as part of any development application.

The landscape design provided for the site by McGregor Partners encompasses expression of remnant cultural heritage of the site through retention of most existing trees, reuse of heritage buildings and refurbishment of the precinct into a series of spaces guided by the existing and future built context. The design has embraced 'urban ecology' principles where the site design components are integral to the social, environmental and ecological systems.

The Masterplan provides for a diverse range of landscaping treatment in the public and private spaces as provided by the landscape plan.

Master Plant List

Trees 25 L [min.] 400L [max.]

Acacia maidenii - Maidens Wattle [5-6m]
Acmena smithii - Lillipilly [5-10m]
Allocasuarina littoralis - Black She-oak [5-10m]
Allocasuarina torulosa - Forest She-oak [5-7m]
Angophora costata - Smooth-barked Apple [10-15m]
Angophora floribunda - Rough-barked Apple [10-15m]
Banksia aemula - Saw Banksia [4-6m]
Banksia ericifolia - Heath Banksia [4-6m]
Banksia integrifolia - Coastal Banksia [6-10m]
Brachychiton acerifolius - Flame Tree [6-10m]
Casuarina glauca - Swamp Oak [6-10m]
Ceratopetalum gummiferum - NSW Christmas Bush [4-7m]
Corymbia gummifera - Red Bloodwood [8-15m]
Corymbia maculata - Spotted Gum [8-15m]
Cupaniopsis anacardioides - Tuckeroo [5-12m]
Eucalyptus globoidea - White Stringybark [15-20m]
Eucalyptus microcorys - Tallowwood [10-20m]
Eucalyptus pilularis - Blackbutt [15-20m]
Eucalyptus robusta - Swamp Mahogany [10-15m]
Elaeocarpus reticulatus - Blueberry Ash [5-10m]
Eucalyptus saligna - Sydney Bluegum [15-20m]
Eucalyptus signata - Scribbly Gum [15-20m]
Ficus coronata - Creek Sandpaper Fig [4-6m]
Ficus macrophylla - Moreton Bay Fig [15-20m]
Ficus obliqua - Small-leaved Fig [15-20m]
Hakea salicifolia - Willow-leaf Hakea [4-6m]
Hymenosporum flavum - Native Frangipani [5-8m]
Melaleuca armillaris - Bracelet Honey-myrtle [6-8m]

Where planting areas are located above parking areas or on structures a minimum of 800mm soil depth is to be provided for tree planting and 500mm for shrub/ground cover planting.

According to the 'Ecological Constraints Assessment' (prepared by: Ecotone Ecological Consultants, August 2007), the site only contains relatively minor remnants of natural vegetation, mainly in the form of discontinuous patches of narrow bands or riparian vegetation along the riverbank and creek. The bulk of the site is open and consists of cleared pasture. Large areas of the remnant vegetation are degraded and invaded by noxious and environmental weeds to varying degrees, from minor invasions in edge zones to almost complete replacement by exotic species.

Melaleuca ericifolia - Swamp Paperbark [4-6m]
Melaleuca linariifolia - Snow-in-summer [6-10m]
Melaleuca nadosa - Ball Honey-myrtle [4-6m]
Melaleuca quinquenervia - Broad-leaf Paperbark [6-12m]
Melia azederach - White Cedar [6-10m]
Syzygium paniculatum - Magenta Lilly Pilly [7-12m]

Native Ferns

Blechnum cartilagineum - Gristle Fern [80cm]
Doodia aspera - Prickly Rasp Fern [50cm]

Native Shrubs [min. 150mm containers]

Acacia falcata - Sickle Wattle [3-4m]
Acacia floribunda - White Sallow Wattle [4-6m]
Acacia implexa - Lightwood Wattle [4-6m]
Acacia irrorata - Green Wattle [4-6m]
Acacia longifolia - Sydney Golden Wattle [2-4m]
Acacia obtusifolia - Blunt-leaf Wattle [2-4m]
Acacia mearnsii - Black Wattle [3-10m]
Banksia marginata - Silver Banksia [4-6m]
Banksia oblongifolia - Swamp Banksia [2-3m]
Banksia pululosa - Swamp Banksia [2-3m]
Banksia robur - large-leaf Banksia [2-3m]
Banksia spinulosa - Hairpin Banksia [4-16m]
Busaria spinosa - Sweet Bursaria [2-4m]
Callistemon linearis - Narrow-leaf Bottlebrush [2-3m]
Ceratopetalum gummiferum - NSW Christmas Bush [2-4]
Correa reflexa - Common Correa [1-2m]
Crocea exalata - Crocea [1.5m]
Dadonaea viscosa - Narrow-leaf Hopbush [3-5m]
Elaeocarpus reticulatus - Blueberry Ash [3-5m]

The master plant list is derived of native and locally endemic plant species of Greater Taree, to enhance biodiversity. Appropriate species will be chosen from this list according to final site conditions, availability and detailed design considerations.

For a full reference refer to McGregor + Partners 'Landscape Architecture Report for Local Area Plan'.

Hakea dacyloides - Heathland Hakea [1-1m]
Hakea teretifolia - Dagger Hakea [2-3m]
Kunzea ambigua - White Kunzea [2-3m]
Myoporum acuminatum - Mangrove Boobialla [3-4m]
Prostanthera incisa - Cut-leaf Mint Bush [2-3m]
Westringia fruticosa - Coastal Rosemary [2m]

Native Ground Covers/Climbers/Grasses [min. 150mm containers]

Clematis aristata - Clematis
Dianella caerulea - Paroo Lily
Dianella longifolia - Blue Flax Lilly [1m]
Hardenbergia violacea - False Sardaparilla [10cm]
Hibbertia scandens - Snake Vine
Eustrephus latifolius - Wombat Berry
Isolepis nodosa - Knobbly Club-rush
Lomandra longifolia - Spiny Mat Rush [1m]
Lomandra hystrix - Tall Mat Rush [80cm]
Pandorea pandorana - Wonga Wonga Vine
Poa labillardieri - Large Tussock-grass
Viola hederacea - Native Violet [10cm]

Native Wetland Plants/Sedges [min. 150mm containers]

Carex apressa - Tall Sedge [8m]
Carex fascicularis - Tassel Sedge [1m]
Isolepis inundata - Swamp Club rush
Juncus usitatus - Common rush [0.5m]
Juncus pallidus - [1.25m]
Juncus articulatus - Jointed Rush [0.6m]
Juncus pallidus - Pale Rush [1m]
Gahnia sieberiana - Sedge [1.5m]



08.4 Floodplain Management

Low lying parts of the site are subject to flooding as identified by the site analysis undertaken as part of the Masterplan process. Development of flood prone land is to comply with Part E of the Draft Greater Taree Development Control Plan 2008.

08.5 Subdivision

The Masterplan provides for a number of development lots within each precinct having regard for the proposed road layout plan. Subdivision is to be consistent with the Masterplan and comply with Part C of the Draft Greater Taree Development Control Plan 2008.

08.6 Heritage

Part F of the Draft Greater Taree Development Control Plan 2008 provides development guidelines for heritage items which should be complied with. A Heritage Impact Statement is required to be considered as part of any development application for works with the potential to affect heritage items and should have regard to The Aboriginal and Historical Heritage Assessment – Pitt Street Waterfront Development, Chatham, Taree (HLA-Envirosciences September 2007). This assessment identified two heritage items within the area:

- The Manning River Co-operative Dairy Society (ex Dairy Farmers) Factory; and
- The Lime kilns tramway and wharf

In addition the report further identified a number of potential archaeological heritage items of local significance including; railway siding, fuel depots, large shed, readymix, produce store, fishermans cooperative, area of archaeological potential along the Manning River bank, Pitt Street, housing along Pitt Street, farm remains and the Big Oyster. In addition the railway cutting site is a locally rare example of a river side Aboriginal stone artefact site

One of the key design principles for the Masterplan is to protect, retain and reuse as many of the heritage sites as possible. The Masterplan provides for the conservation of number of local heritage buildings within the 'Dairy Heritage Precinct'. The sensitive adaptive re-use of these buildings is an important element to the future development of the area and provides an opportunity to link the site to its past use and create a community focal point.

08.7 Stormwater Management

Stormwater management for the site is to comply with Part C3.5 of the Draft Greater Taree Development Control Plan 2008.

A stormwater strategy has been prepared by Connell Wagner & McGregor Partners as part of the Masterplan design process incorporating water sensitive urban design principles for both public and private space. Stormwater from the site is to be managed to protect natural systems and reflect predevelopment flows in terms of water quality and quantity. The Masterplan makes provision for stormwater design to be intrinsically linked to the natural and proposed landscape features of the site including:

- Stormwater from roads and paved surfaces flows to biotopes/ bioswales where it is filtered under low flow conditions before being released into natural systems.
- Overflow from the road bioswales will be directed into biofiltration biotopes located in the public open space before entering the creek or river.
- Clean roof water from buildings is stored for reuse, including irrigation of public space and private spaces.



08.8 Sustainability

ARUP Sustainability has completed a sustainability action plan for the future development proposed under the Figtrees on Manning Masterplan. This plan has been guided by the NSW Government policy on sustainability (BASIX and the draft Mid North Coast Regional Strategy). The sustainability action plan identifies a range of sustainability measures for the future development of the site across four key performance measures:

- Environment
- Natural Resources
- Societal
- Economic

In order to meet the sustainability commitments to achieve a very high standard in regards to sustainability the performance measures identified by the ARUP sustainability action plan must be addressed at a Development Application stage.

The following is a summary of the sustainability performance measures of the Masterplan. For a full reference refer to ARUP Sustainability's 'Figtrees on the Manning Sustainability Report for Local Area Plan / Masterplan - June 2008'.

Environment

- Ecology: Remediation of creek and adjoining space with 100% native species. Significant increase of vegetation cover against existing condition. Bioswales, creek line and detention pond improve and create new aquatic habitat. Requirement in the DCP for a comprehensive Landscape and Environment Strategy to be developed for the site.
- Water Quality: Bioswales, detention pond and remediated creek to filter stormwater prior to release to Manning River. Requirement in the DCP for a comprehensive Water Strategy to be developed for the site. The Water Strategy to address both water quality and water reduction requirements.
- Management: Regulatory compliance to be exceeded. Best practice sustainability outcomes to be the goal.
- Site: Connections with the surrounding community implemented. Inclusion of a pedestrian and cycle link through the site and linking the CBD.

Natural Resources

- Land Use: No requirement for fill to leave the site (except for Marina excavation). No contaminated land known to be present.
- Energy Reduction: Solar energy is preferred renewable energy source. Use of solar powered street lighting, solar hot water and PV panels. DCP to include energy efficiency standards (e.g. Green Star). Requirement in the DCP for a comprehensive Energy and Carbon Strategy to be developed for the site.
- Materials: DCP to include materials specification. Local materials and local labour to be maximised. Heritage materials to be reused onsite (e.g. rail line).
- Waste: Green and organic waste to be collected as feedstock for composting and community garden. Recycling bins provided in public areas. Construction waste recycling target of 60% by mass. Requirement in the DCP for a comprehensive Waste Strategy to be developed for the site.
- Water Reduction: Greywater recycling onsite. Rainwater to be captured, stored and used for irrigation and other non-potable purposes. AAA water efficient fittings to be specified. Requirement in the DCP for a comprehensive Water Plan to be developed for the site. The Water Plan to address both water quality and water reduction requirements.

Societal

- Community: Design incorporates significant open space areas, public space, entertainment and recreational opportunities. A community garden is proposed. Opportunities for public art to be investigated. Requirement in the DCP for a comprehensive Healthy Community Strategy to be developed for the site.
- Transport: Major cycleway and walkway along the riverfront. New road network, to be kept low speed and designed to minimise through traffic.
- Health and Welfare: Crime prevention through environmental design including passive surveillance by mixed use zones. Local food outlets, low impact traffic, encouragement of walking and cycling.
- Heritage: Significant reuse and adaption of heritage buildings and features.

- Amenity: Provide access to riverbank for entire community. Design guidelines to include minimised fencing use, building orientation to maximise thermal comfort, IEQ requirements (e.g. user controls and natural ventilation).
- Access: Access to the site from many entry points, via road, walkway, cycleway and riverfront. The existing community will be encouraged to use the site.

Economic

- Planning: Site is a mixture of brownfield and greenfield and is effectively infill development. A number of land uses and large areas of open space are proposed.
- Employment: A wide variety of business to be established onsite. Scope for inclusion of commercial office space.
- Viability: Funding security and staging to be determined.
- Innovation: Numerous potential opportunities for Innovation (water supply, energy, built form). Yet to be fully determined.
- Security: Precedence is given to crime prevention through environmental design over systems that require ongoing cost (e.g. security guards).

**Manning Riverfront Development
Traffic Generation Assessment**

Precinct	Area	Dwellings / Rooms	Classification	Assumed Daily Rate	Traffic Generated	Assumed Peak Rate	Base Peak	Site Discount	Discounted Peak	Week Day AM		Week Day PM		Saturday Morning		Sunday Afternoon	
										Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing	Incoming	Outgoing
Chase Residential 1	19860	166	HD Residential	4 / dwelling	662	0.3	50	20%	40	10	30	30	10	5	15	15	5
Chase Mixed Use	13650		Mixed Use	4 / 100m2	546	0.8 / 100m2	109	20%	87	34	10	10	34	60	27	27	60
Chase Commercial	14190		Commercial	10 / 100m2	1419	2 / 100m2	284	40%	170	120	50	50	120	60	25	25	60
Chase Heritage	6310		Heritage	2 / 100m2	126	0.4 / 100m2	25	0%	25	5	0	0	5	20	5	5	20
Chase Hotel and Conference	7550	94	Tourist	4 / unit	378	0.6 / unit	57	0%	57	10	0	0	10	42	15	15	42
Chase Residential 2	4160	35	HD Residential	4 / dwelling	139	0.3	10	20%	8	2	6	6	2	1	3	3	1
Hocana Residential 1	59395	495	HD Residential	4 / dwelling	1980	0.3	148	20%	119	29	90	90	29	15	45	45	15
Hocana Residential 2	12055	67	MD Residential	6 / dwelling	402	0.7	47	20%	38	8	30	30	8	4	15	15	4
Marina 1	38130		Commercial	8 / 100m2	3050	1.6 / 100m2	610	40%	366	300	66	66	300	150	30	30	150
Marina 2	8190		Recreational	4 / 100m2	328	0.8 / 100m2	66	0%	66	10	6	6	10	46	20	20	46
Base Daily Generation					9029		1406		975	528	288	288	528	403	200	200	403
Discounted Daily Generation					6496												
Assumptions										Directional Split							
Hotel Rooms	80 m2 each									Taree CBD / Taree West	65%	343	187	187	343	262	130
HD Units / Apartments	120 m2 each									Taree North	25%	132	72	72	132	101	50
MD Dwellings / Townhouses	180 m2 each									Chatham / Cundletown	10%	53	29	29	53	40	20
												528	288	288	528	403	200
Intersection 1										Left Out / Right in		132	122	122	132		
										Right out / Left in		40	40	40	40		
Intersection 2										Left Out / Right in		42	32	32	42		
										Right out / Left in		4	22	22	4		
Intersection 3										Left Out / Right in		279	65	65	279	176	45
										Right out / Left in		31	7	7	31	20	5
												528	288	288	528	196	50

Volume on Old Pacific Highway at Browns Creek

1990	1995	1998 (Estimate)	2001	2004	2007 (Estimate)
20806	22707	25000	13722	15095	16600

Appendix D

Heritage Supporting Information



Greater Taree
CITY COUNCIL

1 Information Requirements for Heritage Development Applications

1.1 Development Application Information

When is a development application required?

Council should be consulted before carrying out any changes to buildings or sites, which are:

1. Listed as heritage items;
2. In a Conservation Area; or
3. In the vicinity of heritage items or Conservation Areas.

Development applications for development affecting a heritage item or property within a heritage conservation area will need to be supported by sufficient information for Council to assess the application. The information required will vary depending on the nature and complexity of the proposed development or the changes proposed. A summary of the minimum information required to support an application is provided below, however applicants are advised to consult Council on the information requirements prior to lodging the development application.

Do I need a consultant?

For simple development proposals documentation can be prepared by the building owner or manager. Assistance can be sought from Council staff, including Council's Heritage Advisor and/or the Heritage Office where necessary. **Statements of Heritage Impact** for heritage items and/or preparation of development applications for complex proposals, or those which are likely to have a major impact on the heritage significance of an item or a Conservation Area, will usually require the assistance of a suitably qualified consultant who has experience in Heritage Conservation matters.

The use of specialist consultants who are suitably qualified and experienced in heritage matters can significantly reduce the amount of time taken in both the preparation of the development application and its assessment by Council. These time savings can far outweigh the initial cost of their services.

Council and the Heritage Office can provide a list of consultants practicing in heritage related fields.

Written material

The development application should include the following:

- A **statement of significance of the item** (this can be part of the Statement of Heritage Impact);
- A **statement of heritage impact** – the effect the proposed work will have on the heritage significance of the item and its site or the conservation area;
- A **schedule of work** listing the proposed work to the item or property and cross-referenced to drawings;
- The **future use of the item** or property;
- **Consultants reports** if required (eg. historians, archaeologists and engineers), check with Council if this is required;

- A brief **schedule of finishes** cross-referenced to the drawings.

Drawings

- **A location plan and site plan** (drawn to scale) showing the location of the heritage item or property and any other features that may be affected by the proposal (eg. neighbouring structures, outbuildings, trees, significant landscape features, views and vistas). This should also define the title boundaries and, where appropriate, conservation order and/or conservation area boundaries. It should also include a north point.

Depending on the type of development proposed, Council may require the site plan to shown levels across the site and adjoining sites.

Measured drawings of the item as 'existing drawings'.

A measured drawing is a technical or architectural record (drawn to scale) of the heritage item in its existing form. The drawings should clearly identify (where available) previous alterations, dates of construction, materials etc (not required for properties in heritage conservation areas that are not of heritage significance).

Site analysis

Site analysis provides an understanding of the site and the streetscape context. The purpose of the site analysis is to ensure that the relevant constraints and opportunities are taken into account. For any proposed additions, or new buildings, this drawing will usually include:

- Site dimensions, land area, north point and location of existing building as identified on survey;
- The relative location and siting of neighbouring buildings;
- The size, location and botanical name of any major trees on the site, or located on neighbouring land close to your boundary;
- The slope of the land identified by survey spot levels, and/or contours at 0.5 metre intervals;
- Shadow diagram showing shadows cast during the winter solstice for 9 am, 12 noon and 3pm;
- Stormwater and natural drainage lines; and
- Location of any existing view lines from, to or through the site.

Streetscape analysis

Streetscape analysis is required if a new building is proposed, or if any proposed additions will be visible from the street. The purpose of the streetscape analysis is to ensure the potential impact of your proposal on the street is taken into account. A streetscape analysis will describe:

- Dominant patterns of building type (scale, form, character, height, roof pitch, front and side setbacks) in the vicinity;
- Subdivision and development pattern;
- Any consistent horizontal lines in the streetscape, and the general rhythm of buildings and spaces in the street;
- Local transport and parking conditions in the street and the location of garage and driveway accesses in the street vicinity;
- Major planting in both street reserve and front gardens in the immediate vicinity (species, height & spread); and
- Type and height of fencing to the street.

Plans, sections and elevations

Plans, section and elevations (drawn to scale) showing the proposed works by colour or hatching, in accordance with standard architectural and technical drawing practice. These drawings should show how the works would affect existing buildings, structures and features. Fabric to be removed should be shown by dotted line, new fabric by hatching or rendering.

Other Illustrative Material

Coloured photographs of:

- The heritage item or property and its setting where the works impact on this;
- Particular details which will be affected by the proposal; and
- Views, which explain the character of the conservation area where there is an impact on the conservation area.

Photographs should be mounted on A4 sheets, dated and annotated.

- Photographic montages, perspectives, drawings or sketches and scale models illustrating the proposal.
- Early photographs or drawings of the item or area, especially where you are returning an item or property to a known earlier state.
- Colour schemes and information on materials (eg. pictures, brochures and samples).

In some instances additional information may be required to assess an application that is complex or where there are subsurface works proposed that may have an archaeological impact. In these instances a selection of all of the following documents may be required:

- An archaeological assessment report;
- Conservation management plan;
- Conservation policy.

Applicants should contact Council's Heritage Advisor to discuss information requirements for complex development applications or those potentially having an archaeological impact.

1.2 Statement of Heritage Impact

A statement of heritage impact will be required to be submitted with the development application. This should be consistent with the document titled "Statements of Heritage Impact" contained in the NSW Heritage Manual. The statement of heritage impact can form part of the statement of environmental effects, which is required for all development applications.

The statement of heritage impact should address (as a minimum) the following:

1. For development that would affect a heritage item:
 - a) The heritage significance of the item as part of the environmental heritage of Greater Taree, and
 - b) The impact that the proposed development will have on the heritage significance of the item and its setting, including any landscape or horticultural features, and
 - c) The measures proposed to conserve the heritage significance of the item and its setting, and
 - d) Whether any archaeological site or potential archaeological site would be adversely affected by the proposed development, and

- e) The extent to which the carrying out of the proposed development would affect the form of any historic subdivision.
- 2. For development that would be carried out in a **heritage conservation area**:
 - f) The heritage significance of the heritage conservation area and the contribution which any building, work, relic, tree or place affected by the proposed development makes to this heritage significance, and
 - g) The impact that the proposed development would have on the heritage significance of the heritage conservation area, and
 - h) The compatibility of any proposed development with nearby original buildings and the character of the heritage conservation area, taking into account the scale, form, siting, setbacks, materials and detailing of the proposed development, and
 - i) The measures proposed to conserve the significance of the heritage conservation area and its setting, and
 - j) Whether any landscape or horticultural features would be affected by the proposed development,, and
 - k) Whether any archaeological site or potential archaeological site would be affected by the proposed development, and
 - l) The extent to which the carrying out of the proposed development in accordance with the consent would affect any historic subdivision pattern.

Do not always assume what has been altered should be reinstated. Alterations and additions sometimes have special interest of their own. This is particularly so if they have been around for a long time, and were originally designed to fit in. Always ask why and when the changes were made. Article 16 of the Burra Charter states that:

"The contributions of all periods to the place must be respected. If a place includes the fabric of different periods, revealing the fabric of one period at the expense of another can only be justified when what is removed is of slight cultural significance and the fabric which is revealed is of much greater cultural significance."

Often the removal of a balcony or verandah enclosure, for example, will enhance people's appreciation of an old house. Sometimes however an addition may have interest of its own eg. a sympathetic Inter-War addition to a Federation house.

1.3 Archaeological assessment

The NSW Heritage Act requires an excavation permit where there is reasonable cause to suspect that excavation could result in an archaeological relic being discovered. An archaeological assessment will advise on the likelihood and potential significance of relics on the site and recommend appropriate action in the context of the proposed development. An archaeological assessment should be prepared in accordance with the Archaeological Assessment Guidelines produced by the NSW Heritage Office.

2 Guidelines for Preparing Statements of Heritage Impact and the Importance of Research

2.1 Statements of Heritage Impact

The NSW Heritage Office Manual states that:

A Statement of Heritage Impact identifies the heritage significance of the item, place or area, the impact of any changes being proposed to it and how any impacts arising from the changes will be mitigated.

A Statement of Heritage Impact must:

- Identify why the item, place or area is of heritage significance (the statement of heritage significance);
- Describe the works, change of use and any physical changes to the place;
- Identify the impact or impacts the proposed changes to the heritage item will have on its heritage significance;
- Identify and describe any measures being proposed to lessen negative impacts of the proposed changes;
- Identify why more sympathetic solutions to those being proposed are not viable.

In circumstances where the proposed changes are likely to have a detrimental affect on the item, place or area's heritage significance the Statement of Heritage Impact must:

- Clearly identify any change or changes that will have a negative impact on the heritage significance of the item, place or area;
- State why the impact or impacts cannot be avoided;
- State the steps being taken to minimise their effect or effects.

The Statement of Heritage Impact must include a statement of heritage significance. It should also include an analysis of heritage significance and proposed conservation policies. Physical condition reports and consultant reports should be included where relevant to the application.

The length of the Statement of Heritage Impact will vary depending on the scale and complexity of the proposal. A brief account included in the Statement of Environmental Effects may be sufficient for minor work that will have little impact on the heritage significance of an item. A more extensive report would be required for more complex proposals or those that will have a major impact on the item.

The Statement of Heritage Impact must address the site of the item or place in its entirety. Features of the item and site, including Configuration, layout, setting, buildings and other structures, landscape features (such as gardens, trees, paths and walls), archaeological features (such as wells) and views in and out of the site should be identified where the proposal affects these features.

Research

The three main aims to research are:

- To find out something about the history of building from documentary sources. Old drawings and photographs are the

best if you can find them. At the very least, find out when your building was originally built. There are publications available (see list below), which provide detailed information on how to research your building, and where to go for information.

- Inspect the building itself for clues about past alterations. In the absence of documentary sources this will be your best source of information. You should also look at other buildings in the area which are of similar design, or which might even have been identical when originally built
- Familiarise yourself with typical designs and stylistic features of the period. This is never enough on its own. It will also take an experienced practitioner to apply a general knowledge of styles to your particular situation.

3 Guidelines for Maintenance and Change

3.1 Maintaining and Restoring Existing Buildings

This section sets out how to maintain and restore buildings so that the significance of the heritage item or the contribution the building makes to the conservation area is retained. The information is divided into suggestions and guidelines for changing or treating specific elements and materials of a building.

3.1.1 Brickwork and Walls

Explanation

Most Federation period buildings were constructed of redbrown bricks and were 'tuck-pointed'. Later bricks tended to be darker, usually from being left in the kiln longer. Burnt blue and liver bricks were typical of the Inter-War period. Different bricks were often used at the sides and rear, usually referred to as 'commons'.

Many houses have decorative details; foundations, fencing, verandahs and stairs that have sandstone elements or feature brickwork and some have decorative details and panels in stucco. Fully rendered buildings however fell out of favour during the period.

Objectives

- To ensure retention of original wall treatments.

Recommendations

1. Make sure that any maintenance or alteration to brick walls visible to the street matches the colour, brick, bond pattern and mortar joints detail of the remaining or original walls. To do this it may be possible to get second hand bricks from the period, or you may be able to use bricks from another part of your building. Check the ranges available from local and commercial manufacturers as many produce specialist bricks for restoration purposes.
2. Where brickwork is in poor condition, a specialist bricklayer can repoint joints.
3. Original face brick should never be rendered as this will destroy the building's original colours and textures, and rob it of its period character. Where hard rendering of face brick has already occurred it may be possible to demolish a rendered wall, turn around the bricks and re-use them. This is a time consuming exercise and is only really appropriate where small parts of a wall are affected. Otherwise it is best not to further alter the original fabric.
4. Where paint or render cannot be easily removed, a good halfway solution is to paint external walls in colours matching the original brick. Try to get the best match possible. You can determine the original brick colour by removing a section of the paint or render, or finding some area that was not completely covered.

5. Another half-way solution is to restore other original detail to compensate, including leadlight glazing to windows, and timber details to verandahs. Screen planting should also be considered in conjunction with the above options.
6. Sandstone details and foundations should be retained and stabilised wherever possible. Alterations should endeavour to replace disturbed or worn sandstone or provide compatible details and materials in new work.

3.1.2 Roofs

Explanation

Original roofs in the area were either corrugated iron, slate or tiled in terracotta. Corrugated iron roof sheeting was laid in shorter lengths and painted to inhibit rust. The terracotta tiles were invariably in the same pattern, called the Marseilles pattern. The terracotta was unglazed (or semi-glazed) and usually had a distinctive red or orange colour.

Objectives

- To encourage roofs and materials consistent with the original slate and tiled roofs of the Federation and Inter-War periods;
- To encourage replacement roofs to match original materials or in an approved alternative material.

Recommendations

1. Using modern roofing materials is strongly discouraged. This can significantly alter the character and appearance of an older building. Modern concrete tiles can also cause practical problems. Concrete is heavier than slate for example and can cause roof timbers to sag.
2. Completely re-roofing a building is an expensive exercise. The price differences between corrugated iron roof sheeting and continuous roof sheeting materials or concrete tiles and terracotta tiles however, are not prohibitive. The result in terms of future saleability is worth the investment. There are also new and relatively inexpensive options for slate roofs that have become available.
3. Note also chimneys, capping, gutters, rainwater heads and downpipes. Imperial tile sizes may be hard to match exactly. Check with specialist heritage suppliers.
4. Where you have difficulty matching materials, sizes and colours one solution is to take tiles or slates from the rear of the building. Good tiles or slates from the rear can replace broken or missing tiles at the front. The back can then be repaired with new tiles or slates, which match the old as closely as possible.
5. Where the roof has been altered, consider remedial work according to your budget. If you are planning to re-roof, check to find out if the original form of the roof has been altered. Was for example, the verandah roof originally separate, or was it connected to the main roof? Have roof pitches been altered? Have gables been added or removed?
6. Re-roofing in slate or Marseilles tiles should be considered when roofing next comes due for replacement. Do not use glazed or inappropriately coloured tiles. Do not use thick concrete tiles meant to imitate slate.

3.1.3 Verandahs

Explanation

Often verandahs have been substantially replaced or enclosed. Others may simply have lost their original detailing, or had it replaced by unsympathetic or non-original detailing. This has a big impact on the way an older building presents to the street.

Objectives

- To encourage the retention and repair of existing original verandahs and reinstatement of verandahs and verandah details.

Recommendations

1. Re-instating a verandah can do a lot to bring back the original character of a house. Try and find out what your original verandah looked like and reinstate it. Note the shape, form and structure of the original verandah roof. Is the verandah separate from the main roof? Is it at the same pitch as the main roof? Next, note the profile of the verandah. Is it bullnosed, convex, concave or skillion? Is the verandah hipped at one end? If you cannot find out what the original verandah looked like, and the house has been substantially altered otherwise, erect a simple/sympathetic structure in keeping with the original style of the house. Look at other houses in the area (which would have been the same originally) and which still have their original verandah. Base your design on those. Do not use highly decorative or ornate verandah detailing unless you know it was original.

3.1.4 Fences

Explanation

Front fences were an extremely important streetscape element in both the Federation and Inter-War periods.

Objectives

- To encourage the retention and repair of existing original fencing;
- To encourage the retention and repair of existing original fencing consistent with original buildings.

Recommendations

1. Wherever possible existing original fences should be retained and repaired. In cases where there is no direct evidence of the form of the original fence it may be possible to reconstruct in a way that is sympathetic to the style of the house.
2. Timber hardwood paling fences are most commonly applied to side and rear boundaries. More recently, treated pine has become a reasonable alternative. Sheet metal fencing is not appropriate.
3. High walls or fences should only be erected in exceptional circumstances.
4. If your house is still essentially original, but you cannot find out what the original fence was like, look at other examples in the street or area. Are there any other houses like yours that still have their original fencing? You may also be able to refer to older photos of the property. It is important that the materials and colours match those of your house. Don't use fencing that is more decorative than the house. As far as possible, try to complement original or sympathetic neighbouring fences. Continue fencing at the same height, with similar materials and details. Consistent fencing can considerably unify a streetscape.
5. The simplest means of recreating a Federation period fence is to erect a timber picket fence with matching gates. The pickets may display some variety with either flat or rounded edges, reflective of the Federation period. Inter-war picket fences featured flat-top batten pickets, but low brick fences were probably more widespread, often with a single horizontal timber or metal pipe rail.

3.1.5 Gardens

Explanation

The area's original houses had well cared for front gardens with the minimum of hard paving. Typical front lawns of Federation and Inter-War periods were planted behind the front fence and below the verandahs with border planting of low shrubs or hedge material. Lawns were usually divided into two separate sections by the positioning of the front path. This design element was especially strong in the decades leading up to 1940. Some gardens display symmetrical garden beds, usually circular, within the grassed areas.

A path style common to the Federation period featured tessellated tiling with rounded cement edging. The style persisted in the Inter-War period. Coloured cement paths with matching edging also occur. Brick paving, often in herringbone pattern, was also used for driveways and paths. Tooth brickwork was often used for edging to brick paths.

The most popular lawn species was buffalo grass and, less commonly Couch grass in the larger gardens. Popular ornamental species once commonly found within garden border beds were roses and hydrangeas. Traditional plants of the Federation period include Frangipani, various palm species, jacaranda, cypresses, Chinese elm, camphor laurel, lemon scented gum, photinia, Indian hawthorn, strelitzia, clivia, camellia and azalea.

CAUTION: take care in locating trees and plants with intrusive root systems away from buildings and structures. The installation of a root guard may save in costly future foundation and wall repair. Always seek professional advice if unsure.

Objectives

- To provide attractive front garden areas in keeping with those of the area's original houses;
- To improve the landscape setting of all buildings and the streetscape quality of conservation areas.

Recommendations

1. In general, it is only the front garden that is relevant in maintaining the heritage quality of the streetscape. Some properties however have frontages to two streets. For these properties, side and rear garden presentations need to be considered.
2. Unsympathetic alterations and new buildings are all the more disruptive if they are fully exposed to the street. Landscape screening, together with appropriate fencing, is sometimes the only low cost solution to the problem.
3. Reducing areas of hard surface paving on the site, including both front and rear gardens, is important in maintaining the landscape setting of the dwellings.

3.1.6 Details

Explanation

Most original houses in the conservation area have lost some minor detail particularly window hoods, original windows and doors, original glazing.

Restoring detail is a relatively low cost measure that could have a major positive impact. It is also something that may be done a step at a time, as money and time suit.

Objectives

- To enhance and reinforce the Federation and Inter-War period streetscape by reinstating details;
- To encourage the retention and repair of original detail;
- To encourage reinstatement of detail which has been lost.

Recommendations

1. **Timber:** most minor building elements were made from timber. These include window frames, barge boards, fascia, brackets, columns, friezes etc. Many joinery companies have most popular original profiles in stock. If you have evidence of your original timberwork, a joiner can easily measure a profile and work from it.
2. **Metal:** in the Federation and Inter-War period, wrought iron was the decorative metal most commonly used. It was most often featured on balustrading and fences, usually with one matching the other. Decorative cast iron was more commonly used in the earlier Victorian period.
3. Second hand building suppliers may have replacement pieces of patterned iron work. Matching elements may be found in catalogues or prepared to order.
4. **Flooring & Paving:** pay particular attention to verandah, steps and pathway tiling. What were the original materials, patterns and colours? Slate, tiles and boarding were the most common. If the original survives it should be kept, even if it remains incomplete.
5. **Windows:** match original sill and head heights. Were the original window heads straight or curved? Was stained or patterned glass used? Check local examples for framing layouts. Proportions are important. Original openings should never be enlarged or otherwise altered.
6. **Paint:** to determine original paint colours, try scraping back newer layers of paint. This may reveal an older or original colour. Scrapings should be taken from areas sheltered from the sun and rain. Allow for fading of the original colour. For accurate colour matching you are advised to consult a colour specialist. Previously unpainted surfaces should never be painted. Painting of original stone or brickwork is inappropriate and practically irreversible.

4 Guide to Stylistic Features and Materials Used During Particular Periods

While the final selection of appropriate materials will be closely tied to the particular building under review, the following guide provides a broad framework of acceptable materials.

4.1 Vernacular Timber Buildings

Roof	Hipped roofs clad with timber shingles and later corrugated iron (unpainted). Most roofs were constructed without eaves.
Walls	Symmetrical in plan walls of split slab construction, timber 'plank' and then later the weatherboard house.
Finishes/ Colour Schemes	Exterior wall surfaces were often left as a natural timber finish. Sometimes limewashed in colours ranging from off white to light beige or beige pink. Timber work, including windows and doors, was usually painted only in one colour.
Other	The timber species used in early buildings often depended on the location of the site and the trees close at hand. Early hardwoods used in NSW included Blackbutt, Blue Gum, White Box, Red Box, Grey Box, Spotted Gum, Ironbark and Stringybark. Red Cedar (<i>Toona australis</i>) was very widely used.
Examples	Early accommodation and functionalist buildings such as barns and sheds.

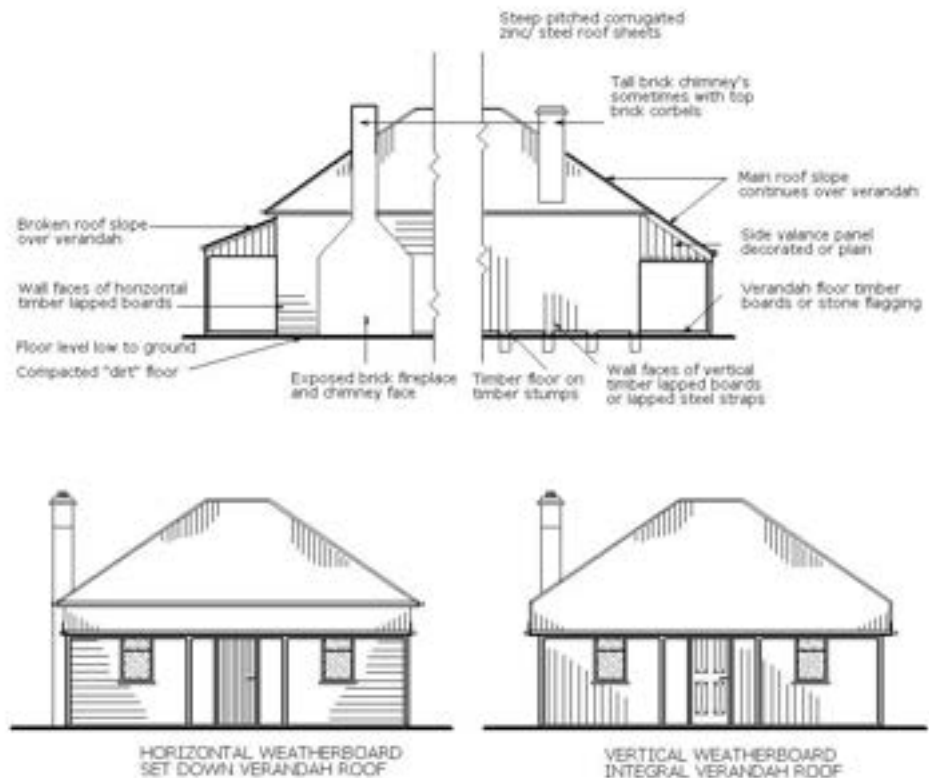


Fig 4.1 Vernacular timber building style

4.2 Colonial

Roof	Hipped roofs clad with timber shingles and later corrugated iron (unpainted). Most roofs were constructed without eaves.
Walls	Symmetrical in plan walls of red face brick with stone dressings
Colour Schemes	Exterior wall surfaces were sometimes coloured with a semi transparent red oxide wash or were limewashed in colours ranging from off white to light beige or beige pink. Timber work, including windows and doors, was usually painted only in one colour. Colours used included beige, stone, drab and dark green. Window sashes and frames were often painted black. If two colours were used a darker colour such as drab or crimson was selected for doors, door frames, shutters and window frames.
Other	Windows formed of twelve or more small panes of glass, with timber panelled or louver shutters to windows. Stone flagged verandahs and turned verandah columns or square posts.
Examples	Most Colonial buildings are residential or outhouse type

4.3 Georgian

Roof	Corrugated iron (painted or unpainted), timber shingles
Walls	Brick smooth faced painted (normally white) or rendered, sandstone, timber boards, concrete blocks, rendered or painted to match stonework. Brickwork was often finished with whitewashed stucco or light cement render.
Colour Schemes	Paint or Stucco
Other	Windows generally small, in a vertical format, often six or twelve pane, timber stained. Verandahs usually straight, bullnose or concave corrugated iron.
Example	Residential and Public Buildings such as Courthouses and Churches

4.4 Victorian

Roof	Corrugated iron (painted or unpainted), slate (or acceptable facsimile).
Walls	Primarily brickwork, most often rendered and painted, some exposed. Timber weatherboard painted, profile or section to match existing as closely as possible.
Colour Schemes	Colour schemes may be selected from a range of rich colours. Contrasting colours should be used to highlight architectural details, external windows and door joinery and stone quoining.
Fences	<i>Victorian and some Federation period buildings:</i> preferred materials for replica front fences include cast iron reproduction galvanized steel or aluminum

	spear head or decorative lace types, timber vertical palings or pickets and sandstone blocks. Victorian and Federation cast iron palisade and picket fences with elaborate stone or brick gate posts or columns and plinths, are major streetscape elements
Other	Vertical front windows, French doors with shutters, high gothic proportions. With Italianate, curved forms and arches may be appropriate on windows and doors. Often curved galvanized iron verandah. Verandahs of straight, bullnose or concave corrugated iron and balcony awnings often painted in stripes. The stripes were mostly the width of a single sheet of iron and colours mostly commonly used were green and white (or off white), greens and browns for dark stripes and cream for light stripes.
Examples	Residential buildings, Commercial and Public Buildings such as Hotels and Banking institutions and Churches.

4.5 Federation / Edwardian

Roof	Corrugated iron (predominantly painted red). Roofs were orange terracotta tiles or slate with frilled terracotta ridge cappings. Marseilles tiles. Some use of shingles (on window hoods)
Walls	Red brick exposed. Some public buildings rendered and painted. Red brick, stucco, rough cast painted combinations, painted timber and boarding on gable ends. Dark painted woodwork (Bungalow style).
Colour Schemes	Timberwork and other details on Federation houses should be painted in a light colour to contrast the dark brick.
Fences	Some Federation period buildings preferred materials are dark red bricks or sandstone blocks, in some cases in combination with timber railings. Brick and sandstone fence types also occur in association with Federation style buildings. Some Federation period buildings preferred materials for replica front fences include cast iron reproduction galvanized steel or aluminium spear head or decorative lace types, timber vertical palings or pickets and sandstone blocks. Victorian and Federation cast iron palisade and picket fences with elaborate stone or brick gate posts or columns and plinths are major streetscape elements.
Garden Elements	<p>Typical front lawns of the Federation and Inter-War periods were planted behind the front fence and below the verandahs with border planting of low shrubs or hedge material. Lawns were usually divided into two separate sections by the positioning of the front path. This design element was especially strong in the decades leading up to 1940. Some gardens display symmetrical garden beds, usually circular, with the grassed areas.</p> <p>A path style common to the Federation period featured tessellated tiling with rounded cement edging. The style persisted in the Inter-War period. Coloured cement paths and brick paving, often in herringbone pattern, was also used for driveways and paths. Tooth brickwork was often used for edging to brick paths. The most popular lawn species was buffalo grass, and less commonly couch grass in larger gardens. Popular ornamental species once commonly found within garden border beds were roses and hydrangeas. The sandy nature of the soil does not assist with the growth of these species. The more common species include camellias, azaleas, lavender, clivia and strelitzia. Traditional plants of the Federation period include frangipani, various palm species, jacaranda, cypresses, Chinese elm, lemon scented gum, photinia, Indian hawthorn, strelitzia, camellia and azalea.</p>

4.6 Californian Bungalow

Roof	Terracotta tiles often with decorated finials
Walls	Exposed red brick base with roughcast render above. Gable ends sometimes shingled but more commonly lightweight infill with timber battens.
Colour Schemes	Gables and other lightweight panels in brick may be painted in a contrasting light colour.
Fences	California Bungalows preferred materials are dark red bricks or sandstone blocks, in some cases in combination with timber railings. Brick and sandstone fence types also occur in association with California Bungalow style buildings.
Other	Vertical format casement windows. Massive columns support flat or gable roofs over front porches, sometimes finished with stucco or rendered brickwork.
Examples	Mainly residential

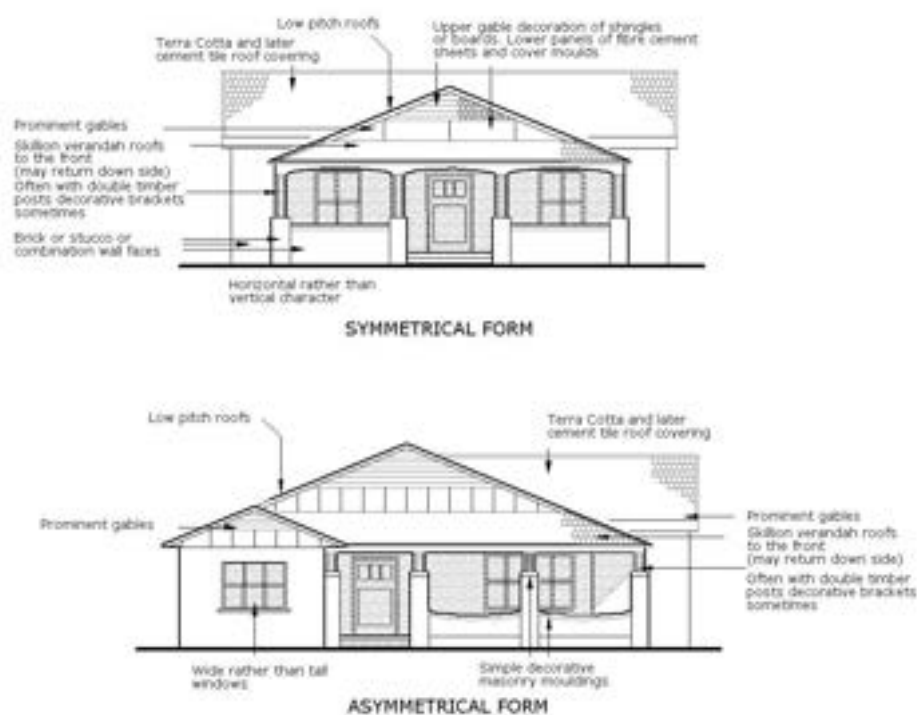


Fig 4.2 Californian Bungalow building style

4.7 Art Deco

Roof	Hipped, terracotta tiles
Walls	Exposed dark red or orange-red textured brick. Patterned brickwork incorporating protruding and recessed bricks in strong geometric designs used in infill panels to emphasise vertical and horizontal lines in the façade. Irregular parapet walls.
Colour Schemes	Gables and other lightweight panels in brick may be painted in a contrasting light colour.
Fences	<i>Art Deco and 1940s buildings</i> : preferred materials for fencing include dark red bullnose and standard bricks. Brick and sandstone fence types also occur in association with Art Deco, style buildings.
Other	Balconies are generally recessed with brick balustrades. Windows follow a horizontal format and may be double hung or casement
Examples	Residential buildings, Commercial and Public Buildings such as Offices, Banking Institutions and Churches

4.8 Spanish Mission

Roof	Small rounded Cordova or terracotta tiles in hipped and or gabled roof form.
Walls	Brick usually rendered and occasionally rendered in swirls. Semi-circular arches and moldings to windows and verandahs.
Colour Schemes	Exterior colour schemes usually consisted of no more than two colours. Typical schemes were mid Brunswick green contrasted with pale cream or red oxide and pale cream. Rendered walls were painted a restrained off white, beige or pale cream.
Other	Barley twist columns used to support verandah arches. Windows multi pane, often with shutters.
Examples	Residential buildings, Commercial and Public Buildings such as Retail, Banking Institutions and Cinemas

4.9 Ocean Liner/ Functionalist

Roof	Flat metal or bitumen or hipped terracotta tiles
Walls	Smooth finish rendered brick often with curved corners and large areas of flat surfaces.
Colour Schemes	Plain surfaces, light toned, smooth textured cement or face brick.
Other	Windows were generally large openings with steel frames, often wrapped around the corners of the building.
Examples	Commercial and Public Buildings such as Hospitals, Factories, Cinemas and Retail institutions.

5 Reference Books

A number of heritage reference books are available at, or through bookshops and local libraries. Greater Taree Council's Heritage Advisor can also advise you on studies of particular areas within the Taree region.

GREATER TAREE AREA STUDIES & LOCAL PUBLICATIONS

Greater Taree City Council Heritage Study Final Reports Volumes 1, 2 & 3, Suters Architects Snell September 1990

Rural Heritage Study Stage 2, Parts 1 & 2, G Smith, April 2003

Rural Heritage Study of the Lower Manning and Oxley Island, G Smith

Rural Heritage Study, Stage 3, L Cullen 2006

Thematic History by G. Smith 2006.

Some local publications are listed below.

Please note there are a considerable number of other publications that have some relevance to the area. Not all are listed here.

Changes of a Lifetime, T Wollard, Sunbird Publications, 1996

The Mountain Speaks, A folk History of the Bulga Plateau, , H Hannah, Newey and Beath Pty Ltd, 1979

Together in this Jungle Scrub, A Folk History of the Comboyne Plateau, , H Hannah, Newey and Beath Pty Ltd, 1981

Voices, A Folk History of the Manning Valley, H Hannah, Newey and Beath Pty Ltd, 1988

Wherrol Flat-Caparra, Memories of a Bygone Era, T Woollard.
Available from Manning Valley Historical Society, Wingham

USEFUL HERITAGE REFERENCES

A Heritage Handbook, Graeme Davidson and Chris McConville, Allen & Unwin, 1991

A History of Australian Gardening Books and a Bibliography 1806-1950, University of Canberra, 1986

A Pictorial Guide to Identifying Australian Architecture, R Apperly, R Irving and P Reynolds – Angus and Robinson, Sydney 1989

Australian Cottages, R Moore, S Burke & R Joyce, 1989

Australian Houses of the 20's and 30's, P Chuffley, 1989

Australia's Home, R Boyd Melbourne University Press, Melbourne 1952

Californian Bungalow in Australia, G Butler, 1992

Caring for Old Houses, I Evans, The Flannel Flower Press, 1989

Colour Schemes for Old Australian Houses, I Evans, C Lucas & I Stapleton, Flannel Flower Press, 1984

More Colour Schemes for Old Australian Houses, I Evans, C Lucas & I Stapleton, Flannel Flower Press, 1992

Decorative Plasterwork: Repair and Restoration, W D Stagg & R Masters, 1986

Fences for Town and Country, J Stacpoole, John Maxwell & Associates, 1998

Getting the Details Right: Restoring Australian Houses, 1890's – 1920's,

Department of Planning, Sydney 1989

Great Gardens of Australia, H Tanner Macmillan, 1976

Historic Gardens in Australia – Guidelines for the Preparation of Conservation Plans, Australian Garden History Society, 1983

How to Restore the Old Aussie House, I Stapleton, Flannel Flower

Press, Sydney 1983

Infill: Guidelines for the Design of Infill Buildings, Heritage Council and Royal Australian Institute of Architects, 1988

NSW Heritage Manual, Heritage Office and Department of Urban Affairs and Planning, 1996

Restoring Old Australian Houses and Buildings; An Architectural Guide, P Cox and H Tanner, 1975

The Australian House, The Flannel Flower Press, Sydney 1983

The Complete Australian Old House Catalogue, The Flannel Flower Press, Yeronga, 1990

The Federation House: A Restoration Guide, I Evans, Flannel Flower Press, Sydney, 1986

The Federation House: Australia's Own Style, H Fraser & R Joyce, 1986

The History and Design of the Australian House, R Irving, 1985

The Illustrated Burra Charter, P Marquis – Kyle and Meredith Walker, 1996

The Maintenance of Heritage Assets Manual, Department of Planning and NSW Heritage Office, 1994

Towards the Dawn: Federation Architecture in Australia 1890-1915, T Howells and M Nicholson, 1989



Greater Taree
City Council


**Greater Taree City Council
On-site Sewage Development
Assessment Framework**

July 2012

Greater Taree City Council On-site Sewage Development Assessment Framework

July 2012

DOCUMENT CONTROL SHEET

 Greater Taree City Council	Document : R.2091.001.03_Final_DAF_GTCCVERSION_12July2012
	Organisation Greater Taree City Council
	Contact: Georgina Martin
	Reference

Synopsis :	<p>This Development Assessment Framework sets out minimum requirements for the assessment, design and construction of on-site sewage management systems (both individual systems and unsewered development applications). The Framework adopts a risk based approach based on the outcomes of Council's <i>Sustainable On-site Sewage Management in Greater Taree Project</i>. The Framework is a reference document that can be used to confirm how applicants can meet the Minimum Standards and Acceptance Criteria set by Council to ensure unsewered development is undertaken in a safe and sustainable manner.</p> <p>Please note that this document was originally prepared on behalf of Council by BMT WBM Pty Ltd as part of the <i>Sustainable On-site Sewage Management in Greater Taree Project</i>.</p>
-------------------	--

REVISION/CHECKING HISTORY

REVISION NUMBER	DATE OF ISSUE	CHECKED BY		ISSUED BY	
1	26 April 2012			26 April 2012	Georgina Martin
2	12 July 2012		Georgina Martin	12 July 2012	GTCC
3	05 September 2012		GTCC	05 September 2012	

CONTENTS

Contents	i
List of Figures	ii
List of Tables	ii
On-site Sewage Management Development Assessment Framework	iv
How to Use This Document	vi
Process for Altering the On-site Sewage Hazard Class	vii
1 SINGLE RESIDENTIAL ALLOTMENTS	1
1.1 Low Hazard Allotments	1
1.2 Medium Hazard Allotments	5
1.3 High Hazard Allotments	9
1.4 Very High Hazard Allotments	12
1.5 Effluent Pump-Out Systems (Tanker Removal)	16
1.6 Pump to Sewer / Low Pressure Sewer Systems	17
2 SUBDIVISION / INCREASING BUILDING ENTITLEMENTS	18
2.1 Low Hazard Allotments	19
2.2 Medium Hazard Allotments	23
2.3 High Hazard Allotments	27
2.4 Very High Hazard Allotments	30
2.5 Consolidation of Unsewered Allotments	34
2.6 Effluent Pump Out	39
2.7 Cumulative Impact Assessment	40
3 NON-DOMESTIC DEVELOPMENT	43
3.1 Low and Medium Hazard Allotments (<10 kL/day)	44
3.2 High and Very High Hazard Allotments plus all Systems with ADWF 10-100 kL/day	49
3.3 On-site and Community Systems >100 kL/day	57
3.4 Non-Domestic Effluent Pump Out Systems	57
4 TECHNICAL PEER REVIEW OF APPLICATIONS	59
5 ACCEPTABLE SOLUTIONS	60
5.1 How to Use the Acceptable Solutions	60

6	MINIMUM STANDARDS	63
6.1	Minimum Standards for Site and Soil Assessment	63
6.2	Wastewater Generation Allowances	66
6.3	Minimum Standards: Treatment Systems	67
6.4	Minimum Standards: Land Application Systems (General)	74
6.5	Minimum Standards: Subsurface Irrigation	79
6.6	Minimum Standards: Surface Irrigation	80
6.7	Minimum Standard: Sub-soil Trenches and Beds	81
6.8	Minimum Standards: Mounds / Raised Beds	82
6.9	Buffer Distances	85

LIST OF FIGURES

Figure 5-1 Decision Tree for Selection of Acceptable Solutions	61
Figure 5-2 Climate Zones for Acceptable Solution Tables	62

LIST OF TABLES

Table 1-1 Low Hazard Assessment Criteria	1
Table 1-2 Low Hazard Acceptable Solution Criteria	3
Table 1-3 Medium Hazard Assessment Criteria	5
Table 1-4 Medium Hazard Acceptance Criteria	7
Table 1-5 High Hazard Assessment Criteria	9
Table 1-6 Minimum Standard for Wastewater Management Reports: Single High Hazard Lot	11
Table 1-7 Very High Hazard Assessment Criteria	12
Table 1-8 Minimum Standards for Constructability Assessments	14
Table 1-9 Minimum Standard for Wastewater Management Reports: Very High Hazard Lot	15
Table 1-10 Where Effluent Pump-out Systems will be considered	16
Table 2-1 Increasing Building Entitlements: Low Hazard Assessment Criteria	19
Table 2-2 Minimum Standard for Wastewater Management Reports:	22
Table 2-3 Medium Hazard Assessment Criteria	23
Table 2-4 Minimum Standard for Wastewater Management Reports:	26
Table 2-5 Increasing Building Entitlements: High Hazard Assessment Checklist	27
Table 2-6 Minimum Standard for Wastewater Management Reports:	29
Table 2-7 Increasing Building Entitlements: Very High Hazard Assessment Criteria	30
Table 2-8 Minimum Standard for Wastewater Management Reports	33

Table 2-9 Consolidating Building Entitlements: Low Hazard Assessment Checklist	35
Table 2-10 Consolidating Building Entitlements: Medium Hazard Assessment Checklist	36
Table 2-11 Consolidating Building Entitlements: High Hazard Assessment Checklist	37
Table 2-12 Consolidating Building Entitlements: Very High Hazard Assessment Checklist	38
Table 2-13 When is a Standard or Detailed Cumulative Impact Assessment Required?	40
Table 2-14 Minimum Standard for Standard Cumulative Impact Assessments	41
Table 2-15 Minimum Standard for Detailed Cumulative Impact Assessment	42
Table 3-1 Non-Domestic Low/Medium Hazard Assessment Criteria¹	44
Table 3-2 Minimum Standards for Constructability Assessments	46
Table 3-3 Minimum Standard for Wastewater Management Reports:	47
Table 3-4 Minimum Standards: Commissioning / Validation of Low/Medium Hazard	48
Table 3-5 Non-Domestic High/Very High Hazard Assessment Checklist^{1,2}	49
Table 3-6 Minimum Standards for Constructability Assessments	52
Table 3-7 Minimum Standard for Wastewater Management Reports	53
Table 3-8 Minimum Standards: Commissioning / Validation of High/Very High Hazard Lots	55
Table 3-9 Minimum Standards: Commissioning / Validation of 10-100 kL/day Systems	56
Table 3-10 Where Effluent Pump-out Systems will be considered in non-domestic situations	58
Table 6-1 Minimum Standards for Site and Soil Assessment Procedures	64
Table 6-2 Summary of Key Wastewater Generation Allowances	66
Table 6-3 Minimum Effluent Quality Standards	68
Table 6-4 Minimum Septic Tank Capacities for Residential Systems	71
Table 6-5 Minimum Septic Tank and Collection Tank Capacities for Pump-out Systems	72
Table 6-6 Minimum Effluent Quality Requirements for Land Application and Reuse	74
Table 6-7 Application of the Tiered Approach to Determination of Buffer Distances	86
Table 6-8 Minimum Buffer Distances for On-site System Land Application Systems	87

ON-SITE SEWAGE MANAGEMENT DEVELOPMENT ASSESSMENT FRAMEWORK

What is the Development Assessment Framework?

The Framework sets out Council's levels of investigation, acceptable solutions (deemed to satisfy) and minimum standards for sewage management in unsewered areas. All unsewered allotments in Greater Taree City have been assigned an On-site Sewage Management Hazard Class. This Hazard Class (Low to Very High) determines the level of detail required for supporting information submitted with development applications and applications to install or alter sewage management facilities.

Why has my property been given a Hazard Class?

Sewage management risk mapping has been completed as part of a technical study titled *Sustainable On-site Sewage Management in Greater Taree*. Adoption of a risk based approach enables Council to approve low risk applications with limited delay or the need for detailed studies. On the other hand, high and very high risk sites will require a high level of scientific and engineering input to demonstrate a proposed on-site system is sustainable.

What do I need to do if I want to submit an application?

Contact Council to confirm the On-site Sewage Hazard Class for your property and obtain the relevant documentation. The Hazard Mapping is also available On Council's website under the Online Mapping link. Use the table below to determine whether you require the services of an on-site system installer alone, or if you require more detailed assistance from an environmental / engineering consultant. You can then contact potential technology providers and environmental / engineering consultants (through the Yellow Pages or internet) to obtain quotes for the necessary work. Local installers and consultants are familiar with Council's DAF and will be able to advise you on what your specific requirements are. Alternatively, you can contact Council for advice.

The Process

- Complete Council's application form and engage the services of an installer or consultant (depending on your property Hazard Class) to prepare your application.
- Submit your application to Council with all required supporting information (in accordance with the Framework) and pay the relevant fee in accordance with our current schedule of fees and charges.
- Applications for Low and Medium Hazard allotments prepared in accordance with our Acceptable Solution criteria and Minimum Standards will be assessed and approved promptly. However failure to meet these criteria and standards will result in longer assessment periods, requests for additional information and potential refusal of the application.
- You may be required to attend a site meeting with Council to discuss your application.
- Council will assess the application based on the final information submitted and issue a determination. In the majority of circumstances, the application will be approved subject to a set of conditions to be satisfied before different stages of the development process can occur.

- However there may be circumstances where the information submitted does not adequately satisfy the concerns of Council or in fact may demonstrate that a particular proposal is not sustainable.

Development Type	Hazard Class	OSSMS Application Form and Fee	Supporting Information for DA	Installer Assistance	Consultant Assistance	DAF Section
Domestic On-site Sewage Management Systems	Low	Yes	N/A	Yes	Limited ¹	1.1
	Medium					1.1
	High				Yes	1.3
	Very High					1.4
	Effluent Pump-out				No	1.5
	Pump to Sewer					1.6
Subdivision / Increasing Building Entitlements	Low	N/A	Yes	Yes	Limited ¹	2.1
	Medium			Yes	Yes	2.2
	High					2.3
	Very High					2.4
	Consolidating Lots			Yes	Possible	2.5
Non-domestic On-site Wastewater Management Systems	Low (<10 kL/day)	Yes	Yes	Yes	Yes	3.1
	Medium (<10 kL/day)					3.2
	High					
	Very High					
	All 10-100 kL/day systems					
	>100 kL/day systems					3.3

Note 1: A suitably qualified consultant will be required to complete the Site and Soil Pro-Forma in these cases. However a full Wastewater Management Report will not be required.

HOW TO USE THIS DOCUMENT

This Development Assessment Framework (DAF) sets out the minimum requirements and Acceptable Solutions for proposed on-site sewage management systems and any increase in unsewered building entitlements within the Greater Taree City Council Local Government Area (LGA). It is designed as a ready reference for system installers and environmental consultants who design on-site systems. This DAF also refers to other council policy and guideline documents in addition to external technical publications that will assist in meeting Councils Minimum Standards. These requirements vary depending on whether an allotment is classified as Low, Medium, High or Very High Hazard. They also vary for different types of development.

All property owners wishing to submit an application to install an on-site sewage management system will require assistance from an installation firm and (as a minimum) completion of a basic site and soil assessment by a suitably qualified consultant. In some cases, a more comprehensive Wastewater Management Report will need to be prepared by a suitably qualified environmental / engineering consultant. Development applications resulting in an increase in existing unsewered building entitlements will always require a Wastewater Management Report as will non-domestic on-site systems.

A checklist is provided for each Hazard class that can be used to confirm if the proposed on-site sewage management system or unsewered subdivision is an Acceptable Solution based on Councils planning, development and on-site sewage management policies. **Where an application fits Acceptable Solution criteria approval will be granted promptly. If not, further information will be requested by Council to demonstrate that the proposal meets Minimum Standards.**

Minimum Standards apply to all aspects of the assessment, design and approval process and are divided into the following components.

- Site and Soil Assessment:
- System Selection and Sizing:
- Constructability:
- Cumulative Impacts.

This DAF document sets out how applications to install an on-site sewage management systems and development applications that increase existing building entitlements can meet Minimum Standards and recommends resources, tools, standards and guidelines to be used in demonstrating compliance. **An application to install an individual on-site system or unsewered subdivision is unlikely to be approved where an applicant fails to use the recommended resources, tools, standards and guidelines to demonstrate compliance.** Notwithstanding, the DAF does provide flexibility for individual applicants to develop innovative or site specific on-site system designs by allowing for a performance based approach where clear justification is provided and a specific level of assessment and design is undertaken.

In the majority of cases, Councils DAF will reduce the uncertainty associated with how much information is required for approval and streamline / expedite the approval process. However, where specific applications are clearly in contrast to Councils objectives for sustainable and cost appropriate on-site

sewage management, the DAF will also make it clear what additional information is required for Council to approve the system / development.

The following flowchart should be used to confirm the level of assistance you will require to prepare information for the application and the relevant component of the DAF applicable to your site. It is not intended that this document be read in its entirety. Users should use the flow chart to direct their attention to the appropriate section.

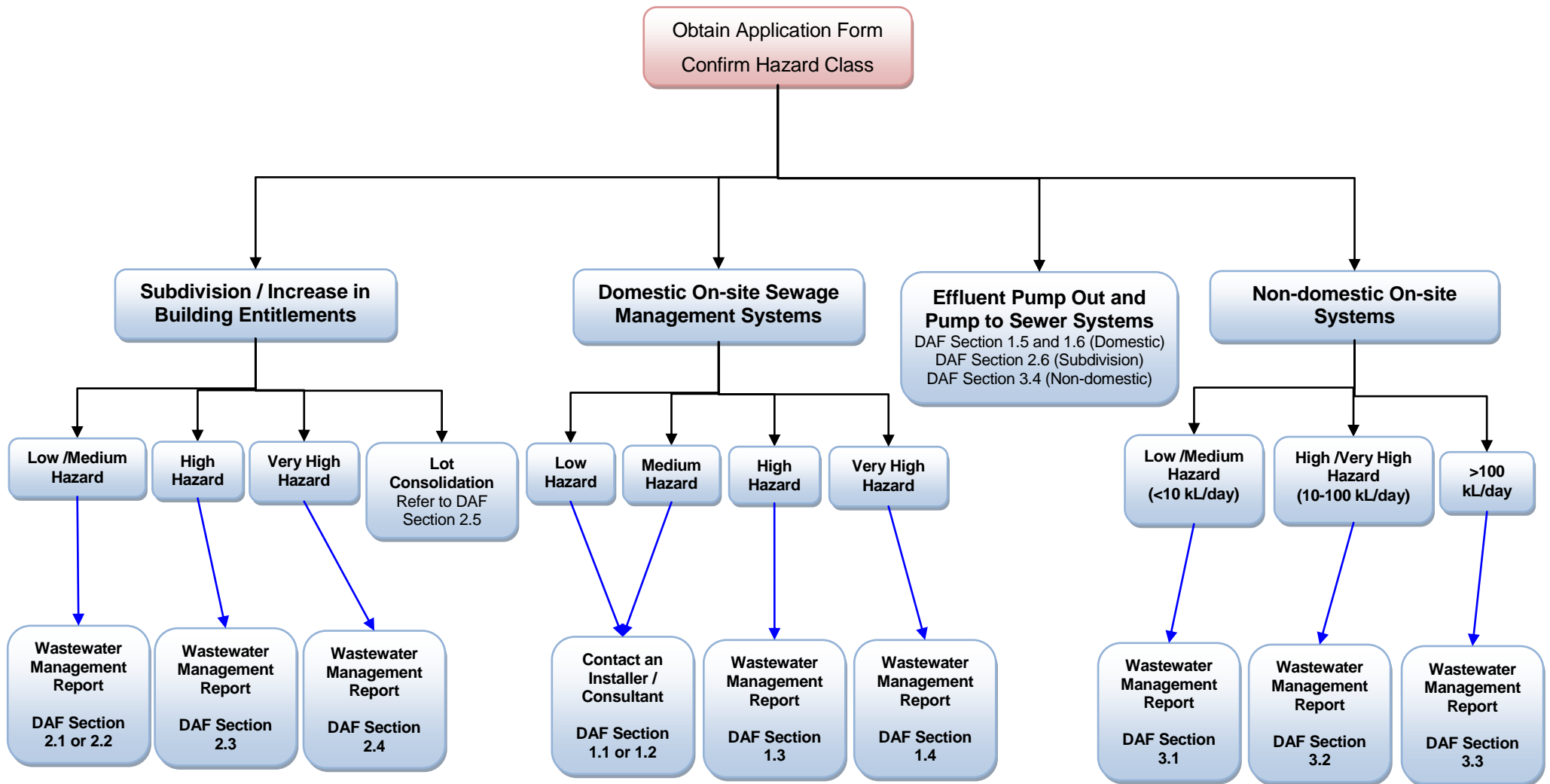
PROCESS FOR ALTERING THE ON-SITE SEWAGE HAZARD CLASS

As documented in the *Greater Taree On-site Sewage Technical Manual*, the On-site Sewage Hazard Map is a broad scale planning tool based on data with varying accuracy and scales. Council readily acknowledge that the individual Hazard Class assigned to each lot is only a broad representation of the likely limitations to sustainable on-site sewage management and sensitivity of the receiving environment. On allotments greater than 4,000 m² in area it is possible that the On-site Sewage Hazard Class may not be an accurate representation of conditions in the precise position of a proposed Effluent Management Area (EMA). Given the DAF does not adopt a prescriptive approach to the selection and design of on-site systems, the implications of inaccuracies in allotment Hazard Classes are limited.

Notwithstanding, the DAF does include scope to apply to Council to have the Hazard Class adjusted to represent the proposed EMA where deemed appropriate. An application form for this process can be obtained from Council and must be completed or supported by an assessment by a suitably qualified soil or environmental consultant. Council will then assess the application to alter the Hazard Class against the hazard matrix and risk protocol documented in the *Greater Taree On-site Sewage Technical Manual*.

Please note that land capability (driven by slope, soil characteristics and climate) for on-site sewage management is not the only consideration in determining Hazard Class. Proximity to sensitive receiving environments also influences Hazard Class. In some cases a proposed EMA might be well suited to the land application of effluent. However, the EMA may be in close proximity to SEPP14 wetlands, aquaculture or intermittent watercourses. In these situations Council is not likely to reduce the Hazard Class given that its role is to determine the level of investigation and design effort required to demonstrate that a proposed system should be approved. Similarly, EMAs situated on suitable land at the foot of a slope are unlikely to warrant adjustment of a Hazard Class.

However Council will give consideration to adjustment of the Hazard Class (and consequently the level of investigation and design effort required) where it can be demonstrated that a suitably sized EMA is well suited to land application and not in close proximity to sensitive receiving environments.



1 SINGLE RESIDENTIAL ALLOTMENTS

This component of the DAF covers assessment and approval requirements for individual on-site sewage management systems. It applies where an applicant proposes one or more of the following.

- To construct or alter an on-site sewage management facility under Section 68 of the *Local Government Act (1993)*.
- Development Applications (DA's) for activities that will include wastewater generating activities.

The specific levels of assessment and supporting information required to accompany an application are slightly different depending on the On-site Sewage Hazard Class (Hazard Class) of the allotment. The Hazard Class should be confirmed with Council prior to undertaking any investigations and reference should then be made to the appropriate sub-section below to confirm requirements.

1.1 Low Hazard Allotments

Low Hazard allotments typically contain few constraints to sustainable on-site sewage management and as such the level of investigation and supporting information required is limited. Notwithstanding, it is important that Council is satisfied that the allotment is in fact a Low Hazard site prior to approval. It is also important to confirm site specific conditions to assist in system selection and design. The following summary table should be used as a guide to the investigations and information required for single residential allotments classified as Low Hazard. The following subsections then provide a detailed explanation of how applicants can meet Councils DAF Minimum Standards and Acceptable Solution criteria.

Table 1-1 Low Hazard Assessment Criteria

Requirements for Acceptable Solutions		Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Site and soil assessment undertaken in accordance with Section 1.1.1 of this DAF using Council's Site and Soil Assessment pro-forma?	<input type="checkbox"/>
System Selection and Sizing	Design criteria and wastewater generation rate obtained from Council's Minimum Standards in Section 6.2?	<input type="checkbox"/>
	System components sized and configured in accordance with Council's Minimum Standards in Section 6?	<input type="checkbox"/>
	Chosen OSMS option is in accordance with available Acceptable Solution for this site (Section 5)?	<input type="checkbox"/>
	Site plan prepared in accordance with Council's Site and Soil Assessment pro-forma?	<input type="checkbox"/>
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?	<input type="checkbox"/>
If you were not able to demonstrate compliance with all of the above Acceptable Solution criteria, you must proceed to the following checklist.		



Acceptance Criteria for Site Specific Designs	
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?
	Completion of a detailed Site and Soil Assessment in accordance with the High Hazard DAF by a suitably qualified consultant.
System Selection and Sizing	Site specific design calculations in accordance with the High Hazard DAF by a suitably qualified consultant.
	Land application system sized using appropriate equation from Section 6 Predicted performance / treatment system/tank accreditation details to be provided.
	List available options and justify selection in accordance with the High Hazard DAF.
	Site plan prepared in accordance with High Hazard DAF (1:500 scale minimum)?
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?

1.1.1 Site and Soil Assessment

Increased flexibility has been provided in the site and soil assessment process to recognise that the level of detail required in a site and soil assessment is dependent on the characteristics of a property. A unique set of Acceptable Solution criteria have been developed for each hazard class. Logically, low and medium hazard allotments have less stringent requirements in order to be deemed to comply than high and very high hazard allotments. This section of the DAF summarises the site and soil assessment process for individual on-site sewage management systems on Low Hazard allotments. It also provides guidance on how applicants can meet Acceptable Solution requirements.

Allotments classified as Low Hazard under Council's DAF require less stringent site and soil assessment processes to be undertaken. However, it is still important to confirm that site and soil characteristics pose minimal limitations to on-site sewage management system construction and operation. There are also a number of crucial site and soil parameters that must be confirmed in order to design the system. Where an increase in building entitlements is proposed (e.g. subdivision), it is vital that suitable effluent management areas (EMA's) are identified through site and soil assessment to avoid imposing overly restrictive sewage management requirements on future lot owners.

Council have produced a Site and Soil Assessment pro-forma (the Pro-forma) that may be used for applications to install or alter individual systems on Low Hazard allotments. Adequate and accurate completion of the Pro-forma will be deemed to comply with Council's requirements. The Pro-forma can be obtained from Council or downloaded from Council's website. Site and soil assessments for Low Hazard sites should be undertaken using the Pro-forma by a suitably qualified soil scientist, environmental consultant or geotechnical engineer. Council will consider the use of site and soil assessment tables or checklists prepared by individual consultants on a case by case basis. They will need to maintain consistency with the standard Council Pro-forma.

Table 1-2 lists the Low Hazard Acceptable Solution criteria. Reference should be made to Table 6-1 for a brief explanation of the important site and soil features that need to be assessed and a list of resources for additional guidance and information. Each site and soil assessment should be undertaken in accordance with the information in the tables in order to be considered an Acceptable Solution. Failure to do so may result in Council requesting a more detailed assessment to be undertaken or delays in the Council assessment process while waiting for additional information. Table 1-2 is reproduced directly from the Site and Soil Assessment Pro-forma and represents a checklist to be completed by environmental / geotechnical consultant.

Table 1-2 Low Hazard Acceptable Solution Criteria

1. Site Assessment	Low Hazard	
	Limit	Comply (tick or cross)
Aspect/exposure of disposal area (sun and wind)	High	<input type="checkbox"/>
Slope of disposal area	< 10%	<input type="checkbox"/>
Flooding – is the property flood prone?	> 1:100 year AEP	<input type="checkbox"/>
Depth to bedrock or hardpan?	> 1.0metres	<input type="checkbox"/>
Depth to groundwater?	> 1.0metres	<input type="checkbox"/>
Groundwater bore – distance to disposal area?	> 250 metres	<input type="checkbox"/>
Permanent waters – distance to disposal area?	> 100 metres	<input type="checkbox"/>
Dams, drains, intermittent watercourses – distance to disposal area?	> 40 metres	<input type="checkbox"/>
Vegetation - removal for disposal area?	No	<input type="checkbox"/>
Any other health or environmental constraints specific to the property?	No	<input type="checkbox"/>
Soil classification (AS/NZS 1547:2012)	Cat. 2-5	<input type="checkbox"/>
<p>Applications must be assessed under the Medium Hazard DAF where site specific investigations confirm a failure to meet any of the Acceptable Solution criteria in this table.</p> <ol style="list-style-type: none"> 1. Slope may be estimated visually. 2. Subsurface criteria must be assessed through excavation of at least one soil test pit within the proposed land application area(s). 3. Soil classification shall be conducted through textural and structural analysis as described in Appendix E of AS/NZS1547:2012. 4. Failure to declare obvious property constraints may trigger additional investigation requirements. 		

1.1.2 System Selection and Sizing

Applications on Low Hazard allotments can be fast tracked following the basic site and soil assessment through use of the Acceptable Solution Tables to select and design the system. Where the Tables are used to develop system designs, Council are able to approve the proposal promptly with limited need for detailed assessments. However, Council need to be confident that the allotment and on-site system proposed can be classified as Low Hazard. Council also need to be shown that an appropriate choice of on-site sewage management has been made following consideration of key available options. Adoption of standard design principles from this DAF should also enable installers and environmental consultants to develop their own standard application and design material for the variety of on-site system options available within the DAF. The Site and Soil Pro-forma allows a designer to nominate which acceptable solution is proposed for the subject site with the aim of minimising the need for a separate report.

In Low Hazard applications where an Acceptable Solution is not adopted for system selection and sizing, applicants will be required to undertake a more detailed level of assessment in accordance with the High Hazard requirements discussed in Section 1.3.2 and attach calculations to the Site and Soil Pro-forma.

1.1.3 Constructability

The term constructability is used to describe key assessment criteria for proposed on-site sewage management systems that have a significant influence over the long-term sustainability and performance. These key assessment criteria include:

- The relative degree of difficulty associated with installing and constructing an on-site sewage management system.
- The relative capital and operational costs associated with the proposed system.
- Acknowledgement by applicants and notification of future property purchasers of the nature of the proposed system, degree of construction difficulty and capital / operational costs.

They should also be assessed relative to the size and value of the development (whether existing or proposed) to be serviced. This includes the financial and technical capacity of site owners and local installers/service technicians to install and operate the system in perpetuity. Councils Application Form to Install a Sewage Management Facility includes a declaration to be signed by land owners acknowledging that they are aware of constructability issues and implications associated with the proposed on-site system prior to approval.

Low Hazard applications to install an on-site system do not require consideration of constructability beyond provision of a signature from the property owner/applicant confirming that the details and implications (including costs) of the proposed system have been explained to them and that they understand the nature of the proposal.

1.2 Medium Hazard Allotments

Medium Hazard allotments typically contain some moderate constraints to sustainable on-site sewage management that can be managed through conventional on-site system designs. Notwithstanding, it is important that Council is satisfied that the allotment is in fact a Medium Hazard site prior to approval. It is also important to confirm site specific conditions to assist in system selection and design. The following summary table should be used as a guide to the investigations and information required for single residential allotments classified as Medium Hazard. The following subsections then provide a detailed explanation of how applicants can meet Councils DAF Minimum Standards and Acceptable Solution criteria.

Table 1-3 Medium Hazard Assessment Criteria

Requirements for Acceptable Solutions		Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Site and soil assessment undertaken in accordance with Section 1.2.1 of this DAF using Council's Site and Soil Assessment pro-forma?	<input type="checkbox"/>
System Selection and Sizing	Design criteria and wastewater generation rate obtained from Council's Minimum Standards in Section 6.2?	<input type="checkbox"/>
	System components sized and configured in accordance with Council's Minimum Standards in Section 6?	<input type="checkbox"/>
	Chosen OSMS option is in accordance with available Acceptable Solution for this site (Section 5)?	<input type="checkbox"/>
	List available options and justify selection based on site and soil constraints with brief statement.	
	Site plan prepared in accordance with Council's Site and Soil Assessment pro-forma?	<input type="checkbox"/>
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?	<input type="checkbox"/>
If you were not able to demonstrate compliance with all of the above Acceptable Solution criteria, you must proceed to the following checklist.		



Acceptance Criteria for Site Specific Designs	
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?
	Completion of a detailed Site and Soil Assessment in accordance with the High Hazard DAF by a suitably qualified consultant.
System Selection and Sizing	Site specific design calculations in accordance with the High Hazard DAF by a suitably qualified consultant.
	Land application system sized using appropriate equation from Section 6 Predicted performance / treatment system/tank accreditation details to be provided.
	Summary table of potential options listing advantages and limitations. Bullet point defining why selected option(s) were selected over all others in accordance with the High Hazard DAF.
	Site plan prepared in accordance with High Hazard DAF (1:500 scale minimum)?
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?

1.2.1 Site and Soil Assessment

Increased flexibility has been provided in the site and soil assessment process to recognise that the level of detail required in a site and soil assessment is dependent on the characteristics of a property. A unique set of Acceptable Solution criteria have been developed for each hazard class. Logically, low and medium hazard allotments have less stringent requirements in order to be an Acceptable Solution. This section of the DAF summarises the site and soil assessment process for individual on-site sewage management systems on Medium Hazard allotments. It also provides guidance on how applicants can meet Acceptable Solution requirements.

Allotments classified as Medium Hazard under Council's DAF require less stringent site and soil assessment processes to be undertaken. However, it is still important to confirm that site and soil characteristics pose minimal limitations to on-site sewage management system construction and operation. There are also a number of crucial site and soil parameters that must be confirmed in order to design the system.

Council have produced a Site and Soil Assessment pro-forma (the Pro-forma) that may be used for applications to install or alter individual systems on Medium Hazard allotments. Adequate and accurate completion of the Pro-forma will be deemed to comply with Council's requirements. The Pro-forma can be obtained from Council or downloaded from Council's website. Site and soil assessments for Medium Hazard sites should be undertaken using the Pro-forma by a suitably qualified soil scientist, environmental consultant or geotechnical engineer. Council will consider the use of site and soil assessment tables or checklists prepared by individual consultants on a case by case basis. They will need to maintain consistency with the standard Council Pro-forma.

Table 1-4 lists the Medium Hazard Acceptable Solution criteria. Reference should be made to Table 6-1 for a brief explanation of the important site and soil features that need to be assessed and a list of resources for additional guidance and information. Each site and soil assessment should be undertaken in accordance with the information in the tables in order to be deemed an Acceptable Solution. Failure to do so may result in Council requesting a more detailed assessment to be undertaken or delays in the Council assessment process while waiting for additional information. The table below is reproduced directly from the Site and Soil Assessment Pro-forma and represents a checklist to be completed by an installer or environmental / engineering consultant.

Table 1-4 Medium Hazard Acceptance Criteria

2. Site Assessment	Medium Hazard	
	Limit	Comply (tick or cross)
Aspect/exposure of disposal area (sun and wind)	Moderate	<input type="checkbox"/>
Slope of disposal area	10 – 20%	<input type="checkbox"/>
Flooding – is the property flood prone?	> 1:20 year AEP	<input type="checkbox"/>
Depth to bedrock or hardpan?	> 0.6metres	<input type="checkbox"/>
Depth to groundwater?	> 0.6metres	<input type="checkbox"/>
Groundwater bore – distance to disposal area?	> 250 metres	<input type="checkbox"/>
Permanent waters – distance to disposal area?	> 100 metres	<input type="checkbox"/>
Dams, drains, intermittent watercourses – distance to disposal area?	> 40 metres	<input type="checkbox"/>
Vegetation - removal for disposal area?	No	<input type="checkbox"/>
Any other health or environmental constraints specific to the property?	No	<input type="checkbox"/>
Soil classification (AS/NZS 1547:2012)	Cat. 1-5	<input type="checkbox"/>
<p>Applications must be assessed under the Medium Hazard DAF where site specific investigations confirm a failure to meet any of the Acceptable Solution criteria in this table.</p> <ol style="list-style-type: none"> 1. Slope may be estimated visually. 2. Subsurface criteria must be assessed through excavation of at least one soil test pit within the proposed land application area(s). 3. Soil classification shall be conducted through textural analysis as described in Appendix E of AS/NZS1547:2012. 4. Failure to declare obvious property constraints may trigger additional investigation requirements. 		

1.2.2 System Selection and Sizing

Applications on Medium Hazard allotments can be fast tracked following the basic site and soil assessment through use of the Acceptable Solution Tables (refer to Section 5) to select and design the system. Where the Tables are used to develop system designs, Council are able to approve the proposal promptly with limited need for detailed assessments. However, Council need to be confident that the allotment and on-site system proposed can be classified as Medium Hazard. Council also need to be shown that an appropriate choice of on-site sewage management has been made following consideration of key available options. Adoption of standard design principles from the Acceptable Solutions should also enable installers and environmental consultants to develop their own standard application and design material for the variety of on-site system options available within the DAF. The Site and Soil Pro-forma allows an installer/designer to nominate which acceptable solution is proposed for the subject site with the aim of minimising the need for a separate report.

In Medium Hazard applications where an Acceptable Solution is not adopted for system selection and sizing, applicants will be required to undertake a more detailed level of assessment in accordance with the High Hazard requirements discussed in Section 1.3.2 and attach calculations to the Site and Soil Pro-forma. Appendix K of ASNZS1547:2012 provides general guidance on system selection.

1.2.3 Constructability

The term constructability is used to describe key assessment criteria for proposed on-site sewage management systems that have a significant influence over the long-term sustainability and performance.

- The relative degree of difficulty associated with installing and constructing an on-site sewage management system.
- The relative capital and operational costs associated with the proposed system.
- Acknowledgement by applicants and notification of future property purchasers of the nature of the proposed system, degree of construction difficulty and capital / operational costs.

These first two criteria should be assessed relative to a small number of alternative on-site sewage management options appropriate for the site. They should also be assessed relative to the size and value of the development (whether existing or proposed) to be serviced. This includes the financial and technical capacity of site owners and local installers/service technicians to install and operate the system in perpetuity. Councils Application Form to Install a Sewage Management Facility includes a declaration to be signed by land owners acknowledging that they are aware of constructability issues and implications associated with the proposed on-site system prior to approval.

Medium Hazard applications to install an on-site system do not require consideration of constructability beyond provision of a signature from the property owner/applicant confirming that the details and implications (including costs) of the proposed system have been explained to them and that they understand the nature of the proposal.

1.3 High Hazard Allotments

High Hazard allotments typically contain moderate to major constraints to sustainable on-site sewage management that require site specific assessment and design to overcome. The following summary table should be used as a guide to the investigations and information required for single residential allotments classified as High Hazard. The following subsections then provide a detailed explanation of how applicants can meet Councils DAF Minimum Standards and Acceptable Solution criteria.

Table 1-5 High Hazard Assessment Criteria

	Acceptance Criteria
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?
	Site and soil assessment undertaken in accordance with Section 1.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.
System Selection and Sizing	Design criteria and wastewater generation rate calculated on a site specific basis in accordance with Section 1.3.2 of this DAF by suitably qualified consultant and documented in Wastewater Management Report
	Hydraulic sizing of land application areas using the relevant equation from Section 6. Annual nutrient calculations to be undertaken in accordance with Table 1-6 of this DAF and the <i>Technical Manual</i> by a suitably qualified consultant and documented in Wastewater Management Report. Treatment system/tank accreditation details to be provided.
	Summary table of potential options to be included in Report listing advantages and limitations. Bullet point confirming why selected option is preferred.
	Site plan prepared in accordance with Table 1-6.
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?
	Attendance at a pre-approval site meeting by a Council officer, designer and owner.

1.3.1 Site and Soil Assessment

Increased flexibility has been provided in the site and soil assessment process to recognise that the level of detail required in a site and soil assessment is dependent on the characteristics of a property. A unique set of acceptance criteria have been developed for each hazard class. This section of the DAF summarises the site and soil assessment process for individual on-site sewage management systems on High Hazard allotments. It also provides guidance on how applicants can meet Minimum Standards.

Applications to install or alter an on-site sewage management system for High Hazard allotments cannot use the Council site and soil assessment pro-forma. They must be supported by a Wastewater Management Report prepared in accordance with the Minimum Standards set out in Table 1-6 and Table 6-1. This report should document a more comprehensive site and soil assessment process in addition to presenting design assumptions/calculations and a concept design for the proposed sewage management system. Given that a comprehensive site specific assessment is required for all High Hazard lots, no Acceptable Solution criteria have been assigned. Wastewater consultants must describe and assess site and soil characteristics in sufficient detail to demonstrate to Council how the proposed on-site sewage management system overcomes the nominated constraints (described in more detail in Section 1.3.2).

Site and soil assessment procedures for High hazard allotments should clearly follow nationally recognised standards and guidelines for soil and land survey and on-site sewage management. They should include references to specific procedures undertaken and classification systems used to describe and assess conditions. Refer to Table 6-1 for acceptable standards and guidelines for site and soil assessment procedures. Where individual components of a site and soil assessment are not supported with references to these guidelines and standards, Council may request further justification for Wastewater Management Report outcomes. **Failure to provide this information will result in refusal of the application for High Hazard allotments.**

As a minimum, all of the site and soil parameters described in Table 6-1 must be included in an assessment for High Hazard allotments. It is not adequate to simply list/state the observed or measured value for each parameter. A brief, clear explanation of the implications of the observed / measured value for the on-site system design must be included in the site and soil assessment. **Failure to provide this explanation will result in refusal of the application for High Hazard allotments.**

1.3.2 System Selection and Sizing

Given the likely site and soil limitations present on a high hazard allotment, site specific design calculations must be included in a Wastewater Management Report prepared by a suitably qualified / experienced environmental or engineering consultant. This will assist in selection of a system design capable of overcoming observed constraints. To this end, use of the Acceptable Solution Tables without supporting design calculations is not considered sufficient for High Hazard allotments. The structure and content of High Hazard Wastewater Management Reports essentially follows that traditionally adopted by environmental / geotechnical consultants. There are however, a number of critical components that must be included as a Minimum Standard as part of this DAF. Minimum Standards for preparation and content of High Hazard Wastewater Management Reports are set out in Table 1-6. Key system selection and sizing issues are summarised in the High Hazard Assessment Checklist and Table 1-6. The *Greater Taree City On-site Sewage Technical Manual* contains further guidance and resources on system selection and design processes. Appendix K of ASNZS1547:2012 provides general guidance on system selection.

1.3.3 Constructability

In addition to provision of a signature from the property owner/applicant (as described above), the on-site system designer (and installer if known or the same party) and property owner will be required to attend a pre-approval site meeting with a Council Officer. At this meeting Council will discuss specific details regarding system design, layout, constructability, costs and maintenance requirements with both the designer (and installer) and property owner to ensure they are workable and considered acceptable to the owner. This will include brief consideration of the justification for selecting the chosen treatment and land application technology over other options. Council will also discuss any special conditions they may be considering for the approval to address potential construction, operation and management risks. If property owners and/or designers/installers are not able to attend a site meeting (or make appropriate alternative arrangements in special cases) or Council have significant concerns regarding the constructability and serviceability of the proposed system, a written constructability assessment may be requested (refer to the Very High Hazard constructability requirements for an explanation of this report).

Table 1-6 Minimum Standard for Wastewater Management Reports: Single High Hazard Lot

SINGLE ALLOTMENT Minimum Standard for High Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Number of bedrooms and occupants. Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. Summary of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. Brief and clear explanation of the implications of observed site and soil features for system design and performance. Recommendations on any soil amelioration required. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1-2 paragraphs Table(s) Bullet point list of recommended design elements to overcome constraints.
System Selection	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered. Brief statement justifying selection of treatment and land application system. 	<ul style="list-style-type: none"> Table Bullet point
Design	<ul style="list-style-type: none"> Site specific calculation of design wastewater generation rates in accordance with Section 6.2. Accreditation details for the selected treatment system (where appropriate). Non-accredited treatment systems will require submission of process design information in accordance with Minimum Standards for Non-domestic (<10 kL/day) systems as detailed in Table 3-3. Hydraulic sizing calculations as per Section 6 of the DAF (rationale in <i>Technical Manual</i>). Annual nutrient balance calculations in accordance with <i>Technical Manual</i>. 	<ul style="list-style-type: none"> Table and paragraph justifying calculations. Attach Certificate Table summarising inputs and assumptions accompanied by a summary table of results.
Site Plan	<ul style="list-style-type: none"> Location of tank(s); Location of boundaries, drains, buildings, swimming pools, paths, groundwater bores, dams and waterways; Location of primary and reserve disposal areas; Location of stormwater diversion drains and earth bunds (if applicable); Two metre elevation contours; Location of drainage pipework (centreline). 	<ul style="list-style-type: none"> A4 Site Plan (1:500 scale minimum).
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits. Raw laboratory results for soil analysis. All design calculations and assumptions. 	N/A

1.4 Very High Hazard Allotments

Sites classified as Very High Hazard under the DAF are typically unsuitable for the land application of effluent with approval subject to a comprehensive assessment and design process that includes a detailed evaluation of environment and health protection. Approval requires a commensurate level of assessment, design and construction detail to ensure any proposed on-site system meets the objectives of the *Local Government Act 1993*.

Table 1-7 Very High Hazard Assessment Criteria

Acceptance Criteria	
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?
	Site and soil assessment undertaken in accordance with Section 1.4.1 of this DAF (Very High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.
System Selection and Sizing	Design criteria and wastewater generation rate calculated on a site specific basis in accordance by suitably qualified consultant and documented in Wastewater Management Report
	Daily water and nutrient balance calculations to be undertaken in accordance with Section 9 of the <i>Greater Taree City On-site Sewage Technical Manual</i> by a suitably qualified consultant and documented in Wastewater Management Report. Treatment system/tank accreditation details to be provided. Hydraulic design calculations for all pressure dosed pipework (including drip irrigation) to be provided.
	Summary table of potential options to be included in Report listing advantages and limitations. Preliminary design calculations provided for all potential options along with a clear justification for system selection. Refer to Section 1.4.2 for further guidance.
	Site plan prepared in accordance with Table 1-9 and must include all system components on a survey plan with 2m contours (maximum). Design drawings (to scale) of all non-accredited components showing plan and cross section views.
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form.
	Attendance at a pre-approval site meeting by a Council officer, designer and owner.
	Preparation of a 1-2 page Constructability Assessment by a preferred installer confirming the capacity to install the proposed system and approximate cost range.

1.4.1 Site and Soil Assessments

Increased flexibility has been provided in the site and soil assessment process to recognise that the level of detail required in a site and soil assessment is dependent on the characteristics of a property. A unique set of deemed to comply criteria have been developed for each hazard class. This section of the DAF summarises the site and soil assessment process for individual on-site sewage management systems on Very High Hazard allotments. It also provides guidance on how applicants can meet Minimum Standards.

Applications to install or alter an on-site sewage management system for Very High Hazard allotments cannot use the Council site and soil assessment pro-forma. They must be supported by a Wastewater Management Report prepared in accordance with the Minimum Standards set out in Table 1-9 and Table 6-1. This report should document a more comprehensive site and soil assessment process in addition to presenting design assumptions/calculations and a concept design for the proposed sewage management system. Given that a comprehensive site specific assessment is required for all Very High Hazard lots, no Acceptable Solution criteria have been assigned. Wastewater consultants must describe and assess site and soil characteristics in sufficient detail to demonstrate to Council how the proposed on-site sewage management system overcomes the nominated constraints (described in more detail in Section 1.4.1).

Site and soil assessment procedures for Very High hazard allotments should clearly follow nationally recognised standards and guidelines for soil and land survey and on-site sewage management. They should include references to specific procedures undertaken and classification systems used to describe and assess conditions. Refer to Table 6-1 for acceptable standards and guidelines for site and soil assessment procedures. Where individual components of a site and soil assessment are not supported with references to these guidelines and standards, Council may request further justification for Wastewater Management Report outcomes. **Failure to provide this information will result in refusal of the application for Very High Hazard allotments.**

As a minimum, all of the site and soil parameters described in Table 6-1 must be included in an assessment for Very Hazard allotments. It is not adequate to simply list/state the observed or measured value for each parameter. A brief, clear explanation of the implications of the observed / measured value for the on-site system design must be included in the site and soil assessment. **Failure to provide this explanation will result in refusal of the application for Very High Hazard allotments.**

In addition to the requirements outlined above, site and soil assessment procedures for Very High Hazard allotments *may* also warrant completion of constant head permeability testing in accordance with AS/NZS1547:2012. Results should be used to develop a site specific estimate for saturated hydraulic conductivity and subsequently design loading rates. Site and soil assessors should be aware that due to the highly variable and constrained nature of Very High Hazard lots, Council may request additional investigations on a site specific basis not included in the DAF Minimum Standards. As such, consultants should seek to be proactive in identifying any site specific constraints that require more detailed analysis.

1.4.2 System Selection and Sizing

Lots classified as Very High Hazard display substantial constraints to sustainable on-site sewage management and the installation of new systems requires a high level of site and soil assessment and engineering design input to adequately deal with these constraints. Councils preferred servicing options for Very High Hazard lots are connection to a Mid Coast Water Corporation sewerage system or installation of a decentralised cluster sewage management system. Applications to install individual on-site sewage management systems on these lots will typically not be supported by Council without high level assessment and engineering input. The structure and content of Very High Hazard Wastewater Management Reports must expand beyond High Hazard Wastewater Management Report requirements and typical existing practice. **Typical environmental / geotechnical consultant reports currently submitted to Council are unlikely to be considered sufficient justification for approval to install a sewage management system on Very High Hazard allotments.** Minimum Standards for preparation and content of Very High Hazard Wastewater Management Reports are set out in Table 1-9. Key system selection and sizing issues are summarised in the Table 1-7 and detailed in Table 1-9.

Daily soil water and nutrient modelling must be used in conjunction with one dimensional viral dieoff modelling in shallow groundwater to size land application systems. Reference should be made to Section 9 of the GTCC *Technical Manual* for specific guidance. The following performance targets must be met in sizing the land application area.

- Hydraulic surface surcharge occurring in less than 50% of years (min 30 years):

- Average annual nutrient concentrations in deep drainage are no more than 10% higher than existing background pollutant levels as calculated using the approach recommended in Section 10 of the GTCC *On-site Sewage Technical Manual*;
- Total viral dieoff in shallow groundwater prior to any water supply bores or receiving waters as calculated by Cromer *et al* (2001) as cited in the GTCC *On-site Sewage Technical Manual*.

1.4.3 Constructability

In addition to provision of a signature from the property owner/applicant and attendance by relevant parties at a site meeting (as described above for High Hazard allotments), applications for Very High Hazard allotments will require a written Constructability Assessment to be submitted to Council. A Constructability Assessment is a brief (e.g. 1-2 pages) report prepared by an installer listed in Council's Register of Wastewater Manufacturers, Installers, AWTs Service Agents and Wastewater Consultants to provide Council (and the property owner) with a documented professional opinion on the constructability and serviceability criteria listed in Table 1-8. This includes a general cost estimate for construction/installation and operation of the proposed system.

The Assessment should be undertaken by the company who will be engaged to install/construct the system. A Constructability Assessment is not intended to be exhaustive or unnecessarily large but should document a professional assessment of what the owner (or future) owner of the system can expect during construction and operation. Minimum Standards for a Constructability Assessment are described in Table 1-8.

Table 1-8 Minimum Standards for Constructability Assessments

Constructability / Serviceability Element	Minimum Standard
Degree of difficulty	<ul style="list-style-type: none"> • Nomination of the degree of difficulty (easy, non-standard or difficult) and comparison of the relative degree of difficulty when compared to alternative on-site system options considered. • Identification of critical design elements / system components that will require non-standard or complex installation/construction procedures.
Land area requirements	<ul style="list-style-type: none"> • Statement confirming the total land area requirement of the proposed on-site sewage management system and the proportion of total allotment area occupied by the system.
Construction/installation costs	<ul style="list-style-type: none"> • Estimated cost range including a breakdown of significant components (e.g. treatment unit, land application pipework, excavation, fill e.t.c.).
Operational costs	<ul style="list-style-type: none"> • Approximate annualised cost for operation, monitoring and maintenance of the selected on-site system. • Timeframe for replacement of critical components.
Owner responsibilities	<ul style="list-style-type: none"> • Bullet point list of both regular and intermittent operation and maintenance activities associated with the system (including land application area).

Table 1-9 Minimum Standard for Wastewater Management Reports: Very High Hazard Lot

SINGLE ALLOTMENT Minimum Standard for Very High Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Number of bedrooms and occupants. Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. Summary of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. Detailed explanation of the implications of observed site and soil features for system design and performance. Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1-2 paragraphs Table(s) Up to 1 page of explanation and recommended design elements to overcome constraints. Up to one page.
System Selection	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered including advantages and limitations. Preliminary design calculations for a minimum of 2-4 options. Brief statement justifying selection of treatment and land application system. 	<ul style="list-style-type: none"> Table. Summary table. Paragraph.
Design	<ul style="list-style-type: none"> Site specific calculation of design wastewater generation rates in accordance with Section 6.2 accompanied by water use / wastewater generation data to support design rates for all existing systems upgrades. Accreditation details for the selected treatment system. Non-accredited treatment systems will require submission of process design information in accordance with Minimum Standards for Non-domestic (<10 kL/day) systems as detailed in Table 3-3. Sizing of land application systems using daily soil water/nutrient balance and pathogen dieoff modelling (see Technical Manual). Hydraulic design calculations for all pressurised pipework (including drip irrigation). Design drawings of all non-accredited system components. 	<ul style="list-style-type: none"> Tables and paragraph justifying calculations. Attach Certificate Table summarising inputs and assumptions accompanied by a summary table of results. A4 schematic (not to scale). A4 schematic (not to scale).
Site Plan	<ul style="list-style-type: none"> Survey plan. Location of tank(s); Location of boundaries, buildings, swimming pools, paths, groundwater bores, dams and waterways; Location of primary and reserve disposal areas; Location of stormwater diversion drains and earth bunds (if applicable); Two metre elevation contours; Location of drainage pipework (centreline). 	<ul style="list-style-type: none"> A4 Site Plan (1:500 scale minimum).
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits (Permeability test results). Raw laboratory results for soil analysis. All design calculations and assumptions. 	N/A

1.5 Effluent Pump-Out Systems (Tanker Removal)

An effluent pump-out system utilizes a collection tank (collection well) that receives and stores liquid effluent once it has passed through a septic tank. A road tanker removes the stored liquid effluent on a frequency dependant on the hydraulic loading from the buildings connected to the system. The upfront costs for installation of effluent pump-out systems are generally less expensive than treatment systems but they cost significantly more to operate over the life of the system due to on-going pumping and disposal costs.

Tanker removal systems can be subject to ongoing issues involving noise, odour, increased truck movements, increased damage to local roads and misuse and abuse by property owners. There are also limits on the volume of sewage from tankers that can be accepted at local Mid Coast Water wastewater treatment plants. In essence, effluent pump-out systems are not a sustainable long-term sewage management option. Council will only permit the installation of an effluent pump-out system in a restricted set of circumstances. This section of the DAF sets out situations where effluent pump-out systems will be considered and Minimum Standards for their approval.

Council advocates on-site sewage systems as legitimate long-term management options where appropriate and sustainable. They should only be used as temporary “stop gap” solutions where Council and/or Mid Coast Water have identified some form of centralised or community wastewater management as the preferred long-term servicing option. Effluent pump-out should not be used to enable inappropriate or unsustainable development in unsewered areas. Notwithstanding, consideration will be given to pump-out systems where Council have previously approved development (based on previous, less stringent standards) that is no longer considered sustainable.

The following table summarises the types of allotments and developments where effluent pump-out systems will be considered. **Effluent pump-out systems will not be considered for any rezoning, unsewered subdivision (or other increase in building entitlements) or multi-unit development application. They will only be considered for existing unsewered building entitlements where a sustainable on-site sewage management option is not viable.**

Table 1-10 Where Effluent Pump-out Systems will be considered

Development Scenario	Low to High Hazard And >4,000m ² Useable Land	High Hazard w/ 2,000 – 4,000m ² Useable Land	Very High Hazard And >4,000 m ² Useable Land	Very High Hazard And <4,000m ² Useable Land
Residential (undeveloped)	Not permitted	With justification ¹	With justification ¹	Permitted ²
Residential (developed)		Permitted ²		

Note 1: Refer to Section 1.5.1 for a description of Minimum Standards for justifying effluent pump-out.

Note 2: Only permitted without further justification where the nearest sewer connection is >75 metres from the property or the property is located within a Mid Coast Water potable water supply protection area.

1.5.1 Minimum Standards for Justification of Effluent Pump-out

In situations where Council are willing to consider effluent pump-out “with justification” in Table 1-10, the following information must be submitted as a Minimum Standard for approval.

- A Wastewater Management Report prepared in accordance with Table 1-9 (residential) or Table 3-7 (non-residential) will need to be submitted to Council. The report will need to demonstrate that;

- based on the outcomes of a site and soil assessment, there is insufficient area to contain a sustainable on-site sewage management service; and/or
- an effluent land application area sized in accordance with Table 1-9/Table 3-7 and Section 9.4 of the GTCC On-site Sewage *Technical Manual* cannot realistically be installed on the site.
- A Constructability Assessment prepared in accordance with Table 1-8 will need to be submitted to Council that confirms that installation of an on-site sewage management system is not feasible.
- There may be situations where an on-site sewage management option is technically and environmentally feasible (based on the above assessments) but not the preferred option of the applicant. In these circumstances, the Constructability Assessment will need to include a Net Present Value assessment (20 year duration) that compares life cycle costs between an effluent pump-out and on-site sewage management option. This assessment must demonstrate that life cycle costs for the effluent pump-out system are significantly less than the on-site disposal option (in the order of 50% less expensive).

1.6 Pump to Sewer / Low Pressure Sewer Systems

In some localities within the Greater Taree City LGA, Mid Coast Water Corporation has been unable to construct a conventional gravity sewerage system. In these locations the sewer system available is a pressurized system known as a pump to sewer system. This method requires the installation of a septic tank, collection tank, electrically operated effluent pump, pipework and various valves and controls. Oversight of the approval, installation, operation and maintenance of pump to sewer systems is the responsibility of Mid Coast Water. Applications seeking guidance or approval for pump to sewer systems should contact Mid Coast Water for further information.

2 SUBDIVISION / INCREASING BUILDING ENTITLEMENTS

This element of the DAF applies to **any** unsewered development proposal that has the potential to increase building entitlements. This may include the rezoning or subdivision of land but can also capture boundary realignments where the proposed alteration to property boundaries enables an applicant to utilise a building entitlement that was previously constrained. An example of this scenario might be a situation where a lot is entirely floodprone. Following a boundary realignment, a portion of the revised lot may no longer be floodprone, resulting in the potential to increase wastewater discharges to the local environment. It also addresses development applications where existing allotments are to be consolidated into fewer lots.

Relationship to the Greater Taree Local Environmental Plan

Minimum allotment size for land use zones where unsewered development is permissible is 15,000 m² (1.5 hectares).

Based on the outcomes of the “Sustainable On-site Sewage Management for GTCC” project this minimum allotment size was found to be capable of preventing cumulative off-site impacts in the vast majority of circumstances and receiving environments.

A 1.5 ha minimum allotment size was also found to be consistently adequate to enable a sustainable on-site sewage management service to be established on Low and Medium Hazard allotments.

As such, proposed rezoning or subdivision of Low or Medium Hazard land to create land with an area of not less than 15,000 m² will be considered an Acceptable Solution under this DAF. Limited assessment of on-site sewage management will be required.

Allotments with <4,000 m² of Usable Land (see Section 2.1.4) or allotments classified as High or Very High Hazard under the DAF will still require consideration of minimum allotment size given the potential for site specific constraints to limit useable land.

Development of land on allotments <15,000 m² where reticulated sewerage is not available (e.g. Rural Village or Low Density Residential) will require greater consideration of minimum allotment size for sustainable on-site sewage management.

As described in the text box above minimum allotment requirements within the LEP (not necessarily based on sewage management requirements) will ensure sustainable on-site sewage management will be achievable in most circumstances. The focus of Section 2 of this DAF is on ensuring a minimum of 4,000 m² of Usable Land is available on any proposed unsewered allotment. Where 4,000 m² is not available the DAF sets out minimum investigation and design standards to justify that a wastewater servicing strategy is sustainable.

2.1 Low Hazard Allotments

The DAF provides opportunities for a streamlined development assessment process for Development Applications (DAs) that involve an increase in unsewered building entitlements on Low Hazard allotments. This streamlined process has been included based on the outcomes of Council's *Sustainable On-site Sewage Management* project as detailed in the *GTCC On-site Sewage Technical Manual*. This study established baseline standards for unsewered development that where adopted will provide Council with a high degree of confidence that (subject to correct operation and management) on-site systems will not cause detrimental impacts on ecosystems or human health.

On the basis of these baseline conditions, the DAF contains criteria for Acceptable Solutions which applicants can meet to enable prompt approval. Acceptable Solutions are available for Low Hazard allotments and these are listed in the following table. Where Acceptable Solution criteria cannot be met more detailed assessment and design processes will be required and these are also set out in the following table. Please note an applicant may choose not to adopt the Acceptable Solution criteria for a particular development and engage a consultant to prepare a Wastewater Management Report from the outset.

Table 2-1 Increasing Building Entitlements: Low Hazard Assessment Criteria

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	2-lot Subdivisions (creation of 1 new entitlement) Small subdivisions on Low Hazard allotments can use the Site and Soil Pro-forma provided in Section 1.1.1 to confirm if all Low Hazard criteria can be met for each proposed lot. Where one or more criteria are not met, Council may require a full site and soil assessment in accordance with the procedure documented below for >2-lot subdivisions.	<input type="checkbox"/>
	>2-lot Subdivisions (creation of more than 1 new entitlement) Site and soil assessment undertaken in accordance with Section 2.1.1 of this DAF and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Allotment(s) contains a minimum of 4,000 m ² of usable land?	<input type="checkbox"/>
Constructability		
Cumulative Impacts		



If you were not able to demonstrate compliance with all of the above Acceptable Solution criteria, you must proceed to the following checklist.		
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	
	Site and soil assessment undertaken in accordance with Section 2.1.1 of this DAF (and documented in a Wastewater Management Report by a suitably qualified consultant.	
System Selection and Sizing	Design calculations undertaken (as described in Section 6) to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans (1:500 scale minimum) that are capable of containing land application areas plus reserve (where applicable).	
Constructability		
Cumulative Impacts	Cumulative Impact Assessment undertaken by a suitably qualified consultant in accordance with 2.1.4 and Section 10 of the Technical Manual. <i>Note: A Cumulative Impact Assessment is only required for Low Hazard Allotments where one or more proposed allotment contains less than 4,000 m² of useable land.</i>	

2.1.1 Site and Soil Assessment

Where more than one new building entitlement is proposed (regardless of Hazard Class), a site and soil evaluation will need to be completed by a suitably qualified environmental/engineering consultant and documented in a Wastewater Management Report. Assessments conducted prior to the creation of new lots / building entitlements offer an important opportunity to prevent unfavourable land being assigned for the management of effluent for which the consequences are often irreversible once approved. Site and soil investigations essentially follow the procedure listed in Table 6-1. Additional guidance is provided in Appendix C of AS/NZS 1547:2012. Minimum Standards for site and soil assessment outcomes are listed in Table 2-2

Table 2-2 requires a stronger focus on analysis of the influence of landscape position / characteristics on land capability in comparison to single site assessments. It also requires consideration of the sensitivity of the receiving environment to land application system discharges. For Low Hazard allotments, it is sufficient to identify on the site plan relevant exclusion zones for EMA's provided at least 4,000 m² of useable land remains on all proposed lots.

2.1.2 System Selection and Sizing

Development Applications that propose an increase in unsewered building entitlements (e.g. subdivision) also require some consideration of system selection and sizing in order to demonstrate to Council that the proposed allotments are capable of servicing in a sustainable manner. Applications on Low Hazard allotments simply need to demonstrate that a minimum of 4,000 m² of usable land is available on each proposed lot. In these cases, typically a wide range of treatment and land application systems are suitable and there is limited need to specify particular options at the subdivision or boundary realignment phase.

2.1.3 Constructability

Development applications on Low Hazard allotments for increased building entitlements will be considered to be an Acceptable Solution with respect to constructability where all proposed lots contain more than 4,000m² of usable land. It is assumed that a wide range of land application systems will be feasible on these lots and site conditions are sufficiently flexible to ensure EMAs will allow development to occur.

2.1.4 Cumulative Impacts

Applications for unsewered subdivision or boundary realignments on Low Hazard allotments that result in an increase in building entitlements will be deemed an Acceptable Solution from a cumulative impact perspective where they meet the following conditions.

- Each proposed allotment contains a minimum of 4,000 m² of *useable* land; and
- the proposed Effluent Management Areas (EMAs) ensure land application areas will comply with recommended buffer distances listed in Table 6-8.

Usable land (for the purpose of on-site sewage management) can be considered to be;

total allotment area excluding dams, intermittent and permanent watercourses and open stormwater drains and pits in addition to the relevant buffer distances prescribed in the Greater Taree City Council Development Assessment Framework for those objects.

If either of these conditions is not achieved for an application, it is not an Acceptable Solution and some level of cumulative impact assessment may be necessary. Non-compliant proposals will need to complete this assessment in accordance with the methods described in Council's OSMS Technical Manual and summarised in Section 2.7.

Table 2-2 Minimum Standard for Wastewater Management Reports:

INCREASE IN BUILDING ENTITLEMENTS		
Minimum Standard for Low Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Number of new building entitlements. Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Summary of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Where multiple soil facets are present the site plan should show the approximate boundary between facets. Brief summary of the implications of observed site and soil features for system design and performance. Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1-2 paragraphs Table(s) Minimum 3 soil test pits per soil facet. Bullet point explanations and recommended design elements to overcome constraints. Paragraph or table.
System Selection and Design	<ul style="list-style-type: none"> Reference to Council's <i>Acceptable Solutions</i> with confirmation of the systems included in Council's <i>Acceptable Solutions</i> for the subject site. Summary of minimum footprints of Acceptable Solution LAA's. Brief statement recommending preferred options amongst Acceptable Solutions. 	<ul style="list-style-type: none"> Paragraph. Summary table. Paragraph or Bullet Points.
Site Plan	<ul style="list-style-type: none"> Survey plan. Proposed allotment boundaries, dimensions and area; Location of existing buildings, swimming pools, paths, groundwater bores, dams and waterways; Location of exclusion zones (e.g. setback distances and unsuitable site and soil conditions); Two metre elevation contours; Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> Minimum Site Plan (1:500).
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits. Raw laboratory results for soil analysis. All design calculations and assumptions. 	N/A

2.2 Medium Hazard Allotments

The DAF provides opportunities for a streamlined development assessment process for Development Applications (DAs) that involve an increase in unsewered building entitlements on Medium Hazard allotments. This streamlined process has been included based on the outcomes of Council's *Sustainable On-site Sewage Management* project as detailed in the *GTCC On-site Sewage Technical Manual*. This study established baseline standards for unsewered development that where adopted will provide Council with a high degree of confidence that (subject to correct operation and management) on-site systems will not cause detrimental impacts on ecosystems or human health.

The DAF contains criteria for Acceptable Solutions which applicants can meet to enable prompt approval. Acceptable Solutions are available for Medium Hazard allotments and these are listed in the following table. Where Acceptable Solution criteria cannot be met more detailed assessment and design processes will be required and these are also set out in the following table. Please note an applicant may choose not to adopt the Acceptable Solution criteria for a particular development and engage a consultant to prepare a Wastewater Management Report from the outset.

Table 2-3 Medium Hazard Assessment Criteria

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	2-lot Subdivisions (creation of 1 new entitlement) Small subdivisions on Medium Hazard allotments may use the Site and Soil Pro-forma provided in Section 1.2.1 to confirm if all Medium Hazard criteria can be met for each proposed lot. Where one or more criteria are not met, Council may require a full site and soil assessment in accordance with the procedure documented below for >2-lot subdivisions.	<input type="checkbox"/>
	>2-lot Subdivisions (creation of more than 1 new entitlement) Site and soil assessment undertaken in accordance with Section 2.1.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Allotment(s) contains a minimum of 4,000 m ² of usable land?	<input type="checkbox"/>
Constructability		
Cumulative Impacts		



If you were not able to demonstrate compliance with all of the above Acceptable Solution criteria, you must proceed to the following checklist.		
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	
	Site and soil assessment undertaken in accordance with Section 2.2.1 of this DAF and documented in a Wastewater Management Report by a suitably qualified consultant.	
System Selection and Sizing	Design calculations undertaken (as described in Section 6) to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans (1:500 scale minimum) that are capable of containing land application areas plus reserve (where applicable).	
Constructability		
Cumulative Impacts	Cumulative Impact Assessment undertaken by a suitably qualified consultant in accordance with Section 2.2.4 and Section 10 of the Technical Manual.	

2.2.1 Site and Soil Assessment

Where more than one new building entitlement is proposed (regardless of Hazard Class), a site and soil evaluation will need to be completed by a suitably qualified environmental/engineering consultant and documented in a Wastewater Management Report. Assessments conducted prior to the creation of new lots / building entitlements offer an important opportunity to prevent unfavourable land being assigned for the management of effluent for which the consequences are often irreversible once approved. Site and soil investigations essentially follow the procedure listed in Table 6-1. Additional guidance is provided in Appendix C of AS/NZS 1547:2012. Minimum Standards for site and soil assessment outcomes are listed in Table 2-2

Table 2-2 requires a stronger focus on analysis of the influence of landscape position / characteristics on land capability in comparison to single site assessments. It also requires consideration of the sensitivity of the receiving environment to land application system discharges. For Medium Hazard allotments, it is sufficient to identify on the site plan relevant exclusion zones for EMA's provided at least 4,000 m² of useable land remains on all proposed lots.

2.2.2 System Selection and Sizing

Development Applications that propose an increase in unsewered building entitlements (e.g. subdivision) also require some consideration of system selection and sizing in order to demonstrate to Council that the proposed allotments are capable of servicing in a sustainable manner. Applications on Medium Hazard allotments simply need to demonstrate that a minimum of 4,000 m² of usable land is available on each proposed lot. In these cases, typically a wide range of treatment and land application systems are suitable and there is limited need to specify particular options at the subdivision or boundary realignment phase.

2.2.3 Constructability

Development applications on Medium Hazard allotments for increased building entitlements will be considered an Acceptable Solutions with respect to constructability where all proposed lots contain more than 4,000m² of usable land. It is assumed that a wide range of land application systems will be feasible on these lots and site conditions are sufficiently flexible to ensure EMAs will allow development to occur.

2.2.4 Cumulative Impacts

Applications for unsewered subdivision or boundary realignments on Medium Hazard allotments that result in an increase in building entitlements will be an Acceptable Solutions from a cumulative impact perspective where they meet the following conditions.

- Each proposed allotment contains a minimum of 4,000 m² of *useable* land; and
- the proposed Effluent Management Areas (EMAs) ensure land application areas will comply with recommended buffer distances listed in Table 6-8.

Usable land (for the purpose of on-site sewage management) can be considered to be;

total allotment area excluding dams, intermittent and permanent watercourses and open stormwater drains and pits in addition to the relevant buffer distances prescribed in the Greater Taree City Council Development Assessment Framework (2011) for those objects.

If either of these conditions is not achieved for an application, it cannot be deemed an Acceptable Solution and some level of cumulative impact assessment will be necessary. Non-compliant proposals will need to complete this assessment in accordance with the methods described in Council's OSMS Technical Manual and summarised in Section 2.7.

Table 2-4 Minimum Standard for Wastewater Management Reports:

(Increase in building entitlements on Medium Hazard Lots)

INCREASE IN BUILDING ENTITLEMENTS Minimum Standard for Medium Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> • Name, contact details and qualifications of author(s). • Site location and owner. • Allotment size (m² or ha). • Proposed / existing water supply. • Number of new building entitlements. • Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> • Broad overview of locality and landscape characteristics. • Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. • Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. • Summary of available published soils information for the site. • Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with AS/NZS 1547:2012. • Where multiple soil facets are present the site plan should show the approximate boundary between facets. • Brief summary of the implications of observed site and soil features for system design and performance. • Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> • Paragraph and locality map. • Paragraph or table • Table(s) • 1-2 paragraphs • Table(s) • Minimum 3 soil test pits per soil facet. • Bullet point explanations and recommended design elements to overcome constraints. • Paragraph or table.
System Selection and Design	<ul style="list-style-type: none"> • Reference to Council's <i>Specification</i> with confirmation of the systems included in Councils Acceptable Solutions for the subject site. • Summary of minimum footprints of Acceptable Solution LAA's. • Brief statement recommending preferred options amongst Acceptable Solutions. 	<ul style="list-style-type: none"> • Paragraph. • Summary table. • Paragraph or Bullet Points.
Site Plan	<ul style="list-style-type: none"> • Survey plan. • Proposed allotment boundaries, dimensions and area; • Location of existing buildings, swimming pools, paths, groundwater bores, dams and waterways; • Location of exclusion zones (e.g. setback distances and unsuitable site and soil conditions); • Two metre elevation contours; • Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> • Minimum Site Plan (1:500).
Appendices	<ul style="list-style-type: none"> • Soil bore logs for all test pits. • Raw laboratory results for soil analysis. • All design calculations and assumptions. 	N/A

2.3 High Hazard Allotments

Given that High Hazard allotments typically display one or more significant constraints to sustainable on-site sewage management, the creation of new unsewered building entitlements on these lots requires a higher level of assessment and design to justify approval. Furthermore, Acceptable Solutions are not available for adoption on High Hazard allotments. Site specific assessment and design work is considered mandatory.

Table 2-5 Increasing Building Entitlements: High Hazard Assessment Checklist

	Acceptance Criteria	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Subdivision Procedure in accordance with Section 2.3.1 of this DAF and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Design calculations undertaken (as described in Section 6) to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans (1:500 scale minimum) that are capable of containing land application areas plus reserve (where applicable).	<input type="checkbox"/>
Constructability		
Cumulative Impacts	All proposed lots contain at least 4,000 m ² of Useable Land. All proposed EMA's meet or exceed GTCC setback distances for watercourses, dams, creeks and drains.	<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist.		
Site and Soil Assessment	Must be provided as described above for approval to be issued.	
System Selection and Sizing		
Constructability		
Cumulative Impacts	Cumulative Impact Assessment undertaken by a suitably qualified consultant in accordance with Section 2.4.4 of this DAF and Section 10.2 of the GTCC On-site Sewage Technical Manual.	

2.3.1 Site and Soil Assessment

Where development applications propose more than one new building entitlement (regardless of Hazard Class), a site and soil evaluation will need to be completed by a suitably qualified environmental/engineering consultant and documented in a Wastewater Management Report. Assessments conducted prior to the creation of new lots / building entitlements offer an important opportunity to prevent unfavourable land being assigned for the management of effluent for which the consequences are often irreversible once approved. Site and soil investigations essentially follow the procedure listed in Table 6-1. Additional guidance is provided in Appendix C of *AS/NZS 1547:2012*. Minimum Standards for site and soil assessment outcomes are listed in Table 2-6

Table 2-6 requires a stronger focus on analysis of the influence of landscape position / characteristics on land capability in comparison to single site assessments. It also requires consideration of the sensitivity of the receiving environment to land application system discharges. In the case of increasing building entitlements on High Hazard allotments, scale drawings based on a surveyed plan

of the development must be used to illustrate that sustainable LAAs can be located in a suitable location on the allotment with a high level of confidence.

2.3.2 System Selection and Sizing

Development Applications that propose an increase in unsewered building entitlements (e.g. subdivision) also require some consideration of system selection and sizing in order to demonstrate to Council that the proposed allotments are capable of servicing in a sustainable manner. Development Applications on High Hazard allotments require greater consideration of the likely nature and dimensions of prospective on-site systems to ensure the constraints to sustainable performance can be managed. Table 2-5 and Table 2-6 set out minimum standards for system selection and sizing at the Development Application stage for High Hazard allotments. In summary they include;

- a summary of potential treatment and land application systems considered for the site including advantages and disadvantages;
- a brief statement justifying selection of potential treatment and land application systems; and
- indicative sizing of land application systems using the most limiting of water and annual nutrient balance calculations as set out in Section 6.

2.3.3 Constructability

High Hazard lots require EMA's to be identified on subdivision plans and these EMA's must be capable of fitting the minimum land application area (as determined and documented in the Wastewater Management Report).

2.3.4 Cumulative Impacts

Applications for unsewered subdivision or boundary realignments on High Hazard allotments that result in an increase in building entitlements will be deemed to comply from a cumulative impact perspective where they meet the following conditions.

- Each proposed allotment contains a minimum of 4,000 m² of *useable* land; and
- the proposed Effluent Management Areas (EMAs) ensure land application areas will comply with recommended buffer distances listed in Table 6-8.

Where the above conditions cannot be met a Cumulative Impact Assessment must be completed. Minimum Standards and performance targets for completion of a Cumulative Impact Assessment are summarised in Section 2.7.

Table 2-6 Minimum Standard for Wastewater Management Reports:

INCREASE IN BUILDING ENTITLEMENTS Minimum Standard for High Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Number of new building entitlements. Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Detailed review of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Where multiple soil facets are present the site plan should show the approximate boundary between facets. Detailed explanation of the implications of observed site and soil features for system design and performance. Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1 page Table(s) Minimum 3 soil test pits per soil facet. Up to 1 page of explanation and recommended design elements to overcome constraints. Up to one page.
System Selection and Design	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered including advantages and limitations. Brief statement justifying selection of potential treatment and land application systems. Sizing of land application systems using the most limiting of monthly soil water and annual nutrient balances (see Technical Manual). 	<ul style="list-style-type: none"> Table. Paragraph. Table summarising inputs and assumptions accompanied by a summary table of results and paragraph justifying calculations.
Site Plan	<ul style="list-style-type: none"> Survey plan. Proposed allotment boundaries, dimensions and area; Location of existing buildings, swimming pools, paths, groundwater bores, dams and waterways; Location of exclusion zones (e.g. setback distances and unsuitable site and soil conditions); Location of EMAs capable of containing LAAs and reserves (where applicable); Two metre elevation contours; and Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> Minimum Site Plan (1:500).
Cumulative Impacts (Where required)	<ul style="list-style-type: none"> Summary of approach taken and confirmation of compliance with the Minimum Standards documented in Section 2.7. Methodology documenting the basis and source of input data including reference to site specific data, published information or the <i>Technical Manual</i> to justify use. Results demonstrating compliance with local water quality objectives and adequate management of health risk as defined and demonstrated in Section 10.1.1 of the <i>Technical Manual</i>. Brief discussion of long-term risks to health and environment and recommended management measures to address impacts. 	<ul style="list-style-type: none"> Up to 1 page. 2-4 pages of tables, figures and text. 1-2 pages of tables, figures and text (refer to Section 10.1.1 of the <i>Technical Manual</i>). Up to 1 page.
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits. Raw laboratory results for soil analysis. All design calculations and assumptions including screenshots of cumulative impact spreadsheets/models. 	N/A

2.4 Very High Hazard Allotments

Very High Hazard allotments are significantly constrained with respect to on-site sewage management. The creation of new unsewered building entitlements on these lots will only be considered by Council where comprehensive and highly detailed engineering and environmental evaluation has been completed in accordance with this DAF. This evaluation must demonstrate that the proposed wastewater servicing strategy is achievable and capable of operating for the life of the development as designed. It must also demonstrate that a high level of human health and ecosystem protection will be provided. Acceptable Solutions are not available for adoption on Very High Hazard allotments. Site specific assessment and design work is considered mandatory.

Table 2-7 Increasing Building Entitlements: Very High Hazard Assessment Criteria

	Acceptance Criteria	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Subdivision Procedure in accordance with Section 2.4.1 of this DAF and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Daily water and nutrient calculations undertaken to size a range of suitable land application systems for a range of design wastewater loads (completed as part of a Detailed CIA). Significant detail should be provided to justify nominated effluent quality and land application technologies deemed suitable.	<input type="checkbox"/>
Constructability	EMA's must be shown on subdivision plans including an indicative land application system footprint to clearly demonstrate that on-site sewage management is viable on each lot.	<input type="checkbox"/>
Cumulative Impacts	All proposed lots contain at least 4,000 m ² of Useable Land. Setback distances from watercourses, dams, creeks and drains meet those specified in Table 6-8 of this DAF. Possible establishment of an easement over the proposed Effluent Management Area (EMA) as described in Section 2.3.4.	<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist.	
Site and Soil Assessment	Must be provided as described above for approval to be issued.
System Selection and Sizing	
Constructability	
Cumulative Impacts	Detailed Cumulative Impact Assessment undertaken by a suitably qualified consultant in accordance with Section 2.4.4 of this DAF and Section 10.2 of the GTCC On-site Sewage Technical Manual. CIA results demonstrate compliance with performance targets derived from site specific surface and groundwater monitoring data. Mandatory establishment of an easement over the proposed Effluent Management Area (EMA) as described in Section 2.3.4. In some circumstances Council will require site specific surface or groundwater modelling and assessment to characterise water flow and pollutant attenuation.

2.4.1 Site and Soil Assessment

Where an increase in building entitlements is proposed on a Very High Hazard lot, a site and soil evaluation will need to be completed by a suitably qualified environmental/engineering consultant and

documented in a Wastewater Management Report. Assessments conducted prior to the creation of new lots / building entitlements offer an important opportunity to prevent unfavourable land being assigned for the management of effluent for which the consequences are often irreversible once approved. Site and soil investigations essentially follow the procedure listed in Table 6-1. Additional guidance is provided in Appendix C of ASNZS 1547:2012. Minimum Standards for site and soil assessment outcomes are listed in Table 2-8.

Table 2-8 requires a stronger focus on analysis of the influence of landscape position / characteristics on land capability in comparison to single site assessments. It also requires consideration of the sensitivity of the receiving environment to land application system discharges. In the case of increasing building entitlements on Very High Hazard allotments, scale drawings based on a surveyed plan of the development must be used to illustrate that sustainable LAAs can be located in a suitable location on the allotment with a high level of confidence.

2.4.2 System Selection and Sizing

Where an increase in building entitlements is proposed on a Very High Hazard allotment, a high level of information must be provided to Council to demonstrate that the significant limitations associated with the site can be managed through careful design, construction and operation. It should be noted that Council will not normally support increases in building entitlement on Very High Hazard allotments. Table 2-8 sets out the minimum requirements at the DA stage. It can be seen that approval for an increase in unsewered building entitlements on Very High Hazard allotments essentially requires the concept design of every proposed system.

Daily soil water and nutrient modelling must be used in conjunction with one dimensional viral dieoff modelling in shallow groundwater to size land application systems. Reference should be made to Section 9 of the GTCC *Technical Manual* for specific guidance. The following performance targets must be met in sizing the land application area.

- No hydraulic surface surcharge in an average rainfall year:
- Average annual nutrient concentrations in deep drainage are no more than 10% higher than existing background pollutant levels as calculated using the approach recommended in Section 10 of the GTCC *On-site Sewage Technical Manual*;
- total viral dieoff in shallow groundwater prior to any water supply bores or receiving waters as calculated by Cromer *et al* (2001) as cited in the GTCC *On-site Sewage Technical Manual*.

2.4.3 Constructability

Very High Hazard lots require EMA's to be identified on subdivision plans and these EMA's must be capable of fitting the minimum land application area (as determined and documented in the Wastewater Management Report). In addition to identification of EMA's on subdivision plans, proposed increases in entitlements on Very High Hazard allotments also require an indicative land application system footprint to be identified on a site plan to clearly demonstrate that EMA's are capable of accommodating proposed land application system.

2.4.4 Cumulative Impacts

Applications for unsewered subdivision or boundary realignments on Very High Hazard allotments that result in an increase in building entitlements will be deemed to comply from a cumulative impact perspective where they meet the following conditions.

- Each proposed allotment contains a minimum of 4,000 m² of *useable* land;
- setback distances between the proposed Effluent Management Areas (EMAs) and watercourses, dams, creeks and drains are met as specified in Table 6-8; and
- the performance targets specified in Section 2.4.2 are met for all proposed lots.

In some cases, Council may request a commitment by the developer to establish an easement (through a Section 88b instrument or similar) over the nominated Effluent Management Area (EMA) to protect it from development in perpetuity.

Where the above conditions cannot be met / targets achieved a Detailed Cumulative Impact Assessment is completed to demonstrate risks are adequately managed (refer to Section 2.7 and the *GTCC On-site Sewage Technical Manual*);

Table 2-8 Minimum Standard for Wastewater Management Reports
INCREASE IN BUILDING ENTITLEMENTS
Minimum Standard for Very High Hazard Wastewater Management Reports

Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Number of new building entitlements. Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Detailed review of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Where multiple soil facets are present the site plan should show the approximate boundary between facets. Detailed explanation of the implications of observed site and soil features for system design and performance. Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1 page Table(s) Minimum 3 soil test pits per soil facet. Up to 1 page of explanation and recommended design elements to overcome constraints. Up to one page.
System Selection and Design	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered including advantages and limitations. Detailed justification of selection of potential treatment and land application systems. Sizing of land application systems using daily soil water, nutrient and pathogen balances (see Technical Manual). These calculations will be undertaken as part of the detailed cumulative impact assessment. 	<ul style="list-style-type: none"> Table. 1-2 pages. Table summarising inputs and assumptions accompanied by a summary table of results and paragraph justifying calculations.
Site Plan	<ul style="list-style-type: none"> Survey plan. Proposed allotment boundaries, dimensions and area; Location of existing buildings, swimming pools, paths, groundwater bores, dams and waterways; Location of exclusion zones (e.g. setback distances and unsuitable site and soil conditions); Location of EMAs and an indicative LAA and reserves (where applicable) to clearly demonstrate viability; Two metre elevation contours; and Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> Minimum Site Plan (1:500).
Cumulative Impacts	<ul style="list-style-type: none"> Summary of approach taken and confirmation of compliance with the Minimum Standards documented in Table 2-15. Methodology documenting the basis and source of input data including reference to site specific data, published information or the <i>Technical Manual</i> to justify use. Results demonstrating compliance with local water quality objectives and adequate management of health risk as defined and demonstrated in Section 7 and 10 of the <i>Technical Manual</i>. Brief discussion of long-term risks to health and environment and recommended management measures to address impacts. 	<ul style="list-style-type: none"> Up to 2 pages. 4-8 pages of tables, figures and text. 4-8 pages of tables, figures and text (refer to the <i>Technical Manual</i>). Up to 4 pages.
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits. Raw laboratory results for soil analysis. All design calculations and assumptions including screenshots of cumulative impact spreadsheets/models. 	N/A

2.5 Consolidation of Unsewered Allotments

Development Applications (DAs) that propose the consolidation of existing unsewered allotments require specific consideration with respect to on-site sewage management. The three primary considerations include:

- *Actual* changes in the number of on-site sewage management systems proposed:
- Proposed reduction in the number of existing building entitlements (potential future systems):
and
- The On-site Sewage Hazard Class of the subject property.

When considering the consolidation of existing allotments, the Single Lot Hazard Class must be used.

DAs that propose consolidation of Low and Medium Hazard allotments will be considered an Acceptable Solution in the vast majority of circumstances. As such, approval of sewage management aspects of the DA will be prompt. Applications on High Hazard allotments will still need to demonstrate that proposed wastewater management options address identified constraints. However, less stringent requirements have been assigned with respect to Cumulative Impact Assessment (CIA) where less than 4,000 m² of Useable Land is available on consolidated lots. Very High Hazard allotments will still require a high level of investigation, assessment and design to be undertaken to support wastewater management options.

The following checklists set out Acceptable Solutions and Minimum Standards for development applications proposing to consolidate unsewered allotments. They refer to applicable DAF components previously set out for subdivisions and increases in building entitlements.

2.5.1 Low Hazard Allotments

Development proponents for applications involving the consolidation of Low Hazard allotments (based on existing conditions) will need to address the requirements set out in the following checklist. Where all proposed allotments contain 4,000 m² or more Useable Land, a full Wastewater Management Report will not be required. Applicants will need to submit a site plan demonstrating the availability of 4,000 m² of Useable Land. Council will then require the Site and Soil Pro-forma to be completed by a suitably qualified soil scientist or geotechnical consultant to confirm the site meets the Low Hazard site and soil criteria.

Where one or more of the consolidated lots contains less than 4,000 m² of Useable Land, a Wastewater Management Report completed in accordance with Table 2-6 will be required.

Table 2-9 Consolidating Building Entitlements: Low Hazard Assessment Checklist

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Consolidation with no proposed lots <4,000 m² Useable Land Small consolidations on Low Hazard allotments may not require a full site and soil assessment. Council will require completion of the Site and Soil Pro-forma provided in Section 1.1.1 to confirm if all Low Hazard criteria can be met for each proposed lot. Where one or more criteria are not met, Council may require a full site and soil assessment in accordance with the procedure documented below for >2-lot subdivisions.	<input type="checkbox"/>
	Consolidation with 1 or more proposed lots <4,000 m² Useable Land Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Allotment(s) contains a minimum of 4,000 m ² of usable land?	<input type="checkbox"/>
Constructability	All proposed EMA's meet or exceed GTCC setback distances for watercourses, dams, creeks and drains.	<input type="checkbox"/>
Cumulative Impacts		<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist		
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	
	Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	
System Selection and Sizing	Water balance and annual nutrient calculations undertaken in accordance with Section 6 to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans that are capable of containing land application areas plus reserve (where applicable).	
Constructability		
Cumulative Impacts		

2.5.2 Medium Hazard Allotments

Development proponents for applications involving the consolidation of Medium Hazard allotments (based on existing conditions) will need to address the requirements set out in the following checklist. Where all proposed allotments contain 4,000 m² or more Useable Land and setback distances are met, a full Wastewater Management Report will not be required. Applicants will need to submit a site plan demonstrating the availability of 4,000 m² of Useable Land. Council will also require the Site and Soil Pro-forma to be completed by a suitably qualified soil scientist or geotechnical engineer to confirm the site meets the Medium Hazard site and soil criteria.

Where one or more of the consolidated lots contains less than 4,000 m² of Useable Land and/or setback distances are not achieved, a Wastewater Management Report completed in accordance with Table 2-6.

Table 2-10 Consolidating Building Entitlements: Medium Hazard Assessment Checklist

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Consolidation with no proposed lots <4,000 m² Useable Land may not require a site and soil assessment. Council will require completion of the Site and Soil Pro-forma provided in Section 1.1.1 to confirm if all Low Hazard criteria can be met for each proposed lot. Where one or more criteria are not met, Council may require a site and soil assessment in accordance with the procedure documented below for >2-lot subdivisions.	<input type="checkbox"/>
	Consolidation with 1 or more proposed lots <4,000 m² Useable Land Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Allotment(s) contains a minimum of 4,000 m ² of usable land?	<input type="checkbox"/>
Constructability	All proposed EMA's meet or exceed GTCC setback distances for watercourses, dams, creeks and drains.	<input type="checkbox"/>
Cumulative Impacts		<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist

Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?
	Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.
System Selection and Sizing	Water balance and annual nutrient calculations undertaken in accordance with Section 6 to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans that are capable of containing land application areas plus reserve (where applicable).
Constructability	
Cumulative Impacts	Where consolidated lots contain <4,000 m² Useable Land and/or Setbacks Not Achieved Completion of a Cumulative Impact Assessment in accordance with Section 2.7 of this DAF and the GTCC On-site Sewage Technical Manual. Outcomes must demonstrate achievement of targets set out in Table 2-14 .

2.5.3 High Hazard Allotments

Development proponents for applications involving the consolidation of High Hazard allotments (based on existing conditions) will need to address the requirements set out in the following checklist. A Wastewater Management Report (in accordance with Minimum Standards in Table 2-6) will be required for all consolidation DA's on High Hazard allotments.

Where all proposed allotments contain 4,000 m² or more Useable Land and setback distances are met, indicative system sizing will be required, however site specific Cumulative Impact Assessments will not. Where one or more of the consolidated lots contains less than 4,000 m² of Useable Land and/or setback distances are not achieved, a Simple CIA will be required to be submitted in support of the application.

Table 2-11 Consolidating Building Entitlements: High Hazard Assessment Checklist

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Water balance and annual nutrient calculations undertaken in accordance with Section 6 to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans that are capable of containing land application areas plus reserve (where applicable).	<input type="checkbox"/>
Constructability		<input type="checkbox"/>
Cumulative Impacts	Allotment(s) contains a minimum of 4,000 m ² of Useable land? All proposed EMA's meet or exceed GTCC setback distances for watercourses, dams, creeks and drains.	<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist		
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	
	Site and soil assessment undertaken in accordance with Section 2.3.1 of this DAF (High Hazard Procedure) and documented in a Wastewater Management Report by a suitably qualified consultant.	
System Selection and Sizing	Water balance and annual nutrient calculations undertaken in accordance with Section 6 to size a range of suitable land application systems for a range of design wastewater loads. EMA's must be shown on subdivision plans that are capable of containing land application areas plus reserve (where applicable).	
Constructability		
Cumulative Impacts	Where consolidated lots contain <4,000 m² Useable Land and/or Setbacks Not Achieved Completion of a Cumulative Impact Assessment in accordance with Section 2.7 of this DAF and the GTCC On-site Sewage Technical Manual. Outcomes must demonstrate achievement of targets set out in Table 2-14.	

2.5.4 Very High Hazard Allotments

Development proponents for applications involving the consolidation of Very High Hazard allotments (based on existing conditions) will need to address the requirements set out in the following checklist. In these circumstances, site constraints justify careful assessment and design procedures even where total building entitlements are proposed to be reduced. A Wastewater Management Report (in accordance with Minimum Standards in Table 2-8) will be required for all consolidation DA's on Very High Hazard allotments.

Where all proposed allotments contain 4,000 m² or more Useable Land and setback distances are met, detailed system sizing will be required. Where one or more of the consolidated lots contains less than 4,000 m² of Useable Land and/or setback distances are not achieved, a CIA will be required to be submitted in support of the application. Proposals that involve creation of any new allotment that contains less than 2,000 m² of Useable Land or fails to achieve 50% setback distances between EMA's and watercourses, dams, creeks and drains are unlikely to be approved under the DAF.

Table 2-12 Consolidating Building Entitlements: Very High Hazard Assessment Checklist

	Requirements for Acceptable Solutions	Compliance?
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	<input type="checkbox"/>
	Subdivision Procedure in accordance with Section 2.4.1 of this DAF and documented in a Wastewater Management Report by a suitably qualified consultant.	<input type="checkbox"/>
System Selection and Sizing	Daily water and nutrient calculations undertaken to size a range of suitable land application systems for a range of design wastewater loads (completed as part of a Detailed CIA). Significant detail should be provided to justify nominated effluent quality and land application technologies deemed suitable.	<input type="checkbox"/>
Constructability	EMA's must be shown on subdivision plans including an indicative land application system footprint to clearly demonstrate that on-site sewage management is viable on each lot.	<input type="checkbox"/>
Cumulative Impacts	All proposed lots contain at least 4,000 m ² of Useable Land. All proposed EMA's meet or exceed GTCC setback distances for watercourses, dams, creeks and drains.	<input type="checkbox"/>



If you were not able to demonstrate compliance with all of the above Acceptance Criteria, you must proceed to the following checklist	
Site and Soil Assessment	Must be provided as described above for approval to be issued.
System Selection and Sizing	Daily water and nutrient calculations undertaken to size a range of suitable land application systems for a range of design wastewater loads (completed as part of a Detailed CIA). Significant detail should be provided to justify nominated effluent quality and land application technologies deemed suitable.
Constructability	EMA's must be shown on subdivision plans including an indicative land application system footprint to clearly demonstrate that on-site sewage management is viable on each lot.
Cumulative Impacts	Detailed Cumulative Impact Assessment undertaken by a suitably qualified consultant in accordance with Section 2.7 of this DAF and Section 10.2 of the GTCC On-site Sewage Technical Manual. Results demonstrate compliance with performance targets. Possible establishment of an easement over the proposed Effluent Management Area (EMA) as described in Section 2.3.4.

2.6 Effluent Pump Out

As previously discussed in Section 1.5 effluent pump-out systems are not advocated by Council as a sustainable long-term wastewater servicing scenario. They will be considered in specific circumstances where alternative, sustainable options are not feasible or not affordable and a building entitlement already exists. As such **effluent pump-out systems will not be considered for any unsewered development application that proposes an increase in building entitlements.**

2.7 Cumulative Impact Assessment

Development Applications on unsewered land that propose the creation of new building entitlements will require specific consideration of cumulative / off-site impacts where less than 4,000 m² of Useable Land is identified on any proposed allotment. Similarly, proposed consolidation of existing allotments will also require consideration of cumulative impacts where constraints to on-site sewage are more pronounced. Triggers for the completion of Cumulative Impact Assessment (CIA) are detailed in Section 2.1 to 2.4. This Section specifies Minimum Standards for completion of a CIA where required under the DAF. More detailed guidance on the CIA process can be found in the *Technical Manual* including an example CIA.

One of two CIA procedures will be required for a site depending on the On-site Sewage Management Hazard Class, Useable Land and setback distances proposed. Table 2-13 can be used to determine when and what level of CIA is required for a specific site.

Table 2-13 When is a Standard or Detailed Cumulative Impact Assessment Required?

Hazard Class	Useable Land	Setbacks	CIA Procedure
Low ¹ , Medium or High	>4,000 m ²	Table 6-8 distances met.	None
		50 – 100% of Table 6-8 distances.	Standard CIA
		<50% of Table 6-8 distances.	Detailed CIA
	2,000 – 4,000 m ²	>50% of Table 6-8 distances.	Standard CIA
		<50% of Table 6-8 distances.	Detailed CIA
Very High	<2,000 m ²	All scenarios	

Note 1: Consolidation of Low Hazard Lots will not require a CIA.

2.7.1 Standard Cumulative Impact Assessment

The Standard CIA procedure involves daily modelling of proposed on-site systems in addition to use of standard background pollutant loads and pollutant attenuation rates to evaluate the potential for the increase in on-site systems to significantly alter nutrient loads or pathogen export risks within a subcatchment. It draws on standard data for NSW (background loads) and locally applicable parameters derived as part of the *Sustainable On-site Sewage Management* Study (attenuation rates). An example methodology and case study demonstrating how a Standard CIA should be undertaken is provided in the *GTCC On-site Sewage Technical Manual*. Alternative methodologies will be considered but must meet or exceed the Minimum Standards listed below in order to be approved by Council.

Table 2-14 Minimum Standard for Standard Cumulative Impact Assessments

Risk Assessment Component	Minimum Standard
On-lot Land Application Area (LAA) Assessment	<ul style="list-style-type: none"> Daily water and nutrient mass balance modelling on a site specific basis used to derive average annual hydraulic and pollutant loads to surface and subsurface export routes for each general on-site system LAA type. <p>Refer to Section 9.2 and 9.3 of the GTCC On-site Sewage Technical Manual for Minimum Standards for calculations.</p>
Rainfall-Runoff	<ul style="list-style-type: none"> Average annual estimate of runoff volume using a volumetric coefficient of rainfall. <p>Recommend use of Figure 2.3 (and subsequent equations) from Fletcher <i>et al</i> (2004).¹ See web link below.</p>
Surface and Subsurface Pollutant Export	<ul style="list-style-type: none"> Application of catchment attenuation factor (provided in Table 10-4 of the Technical Manual) to combined surface and subsurface on-site loads based on broad characteristics of the receiving environment.² Mass balance combining attenuated on-site system flows and loads with catchment inputs.
Background Pollutant Loads / Concentrations	<ul style="list-style-type: none"> Sourced from Tables 2.44 - 2.45 or Figures 2.15 – 2.23 of Fletcher <i>et al</i> (2004).¹ Acceptable export rates / concentrations sourced from published local studies.
Environment and Health Protection Targets ³	<ul style="list-style-type: none"> No more than 10% increase in average annual nitrogen and phosphorus loads (kg/year) based on existing undeveloped background loads. All land application areas sized to prevent hydraulic failure (surcharging) in 50% of years.

Note 1: Fletcher *et al* (2004) available from <http://www.catchment.crc.org.au/pdfs/technical200408.pdf>.

Note 2: Refer to Section 7.5.5 of the Technical Manual for explanation of attenuation factor derivation.

Note 3: Site specific targets can be developed and justified on a case by case basis. Outcomes must meet or exceed those achieved by the above targets.

2.7.2 Detailed Cumulative Impact Assessment

Minimum Standards for completion of a Detailed Cumulative Impact Assessment are summarised in

Table 2-15. An example methodology and case study demonstrating how a Detailed CIA should be undertaken is provided in the *GTCC On-site Sewage Technical Manual*. The Detailed CIA involves daily mass balance modelling of on-site sewage management system performance and catchment runoff and pollutant loads to estimate the potential human health and ecosystem impacts of multiple on-site systems. Detailed CIA will require specialist input from consultants with catchment / water quality modelling and assessment experience and expertise and the application of computer software designed to assess these impacts. Alternative methodologies will be considered but must meet or exceed the Minimum Standards listed below in order to be approved by Council.

Table 2-15 Minimum Standard for Detailed Cumulative Impact Assessment

Risk Assessment Component	Minimum Standard
On-lot Land Application Area (LAA) Assessment	<ul style="list-style-type: none"> Daily water and nutrient mass balance modelling on a site specific basis used to derive average annual hydraulic and pollutant loads to surface and subsurface export routes. Viral die-off modelling.
Rainfall-Runoff and Groundwater Recharge	<ul style="list-style-type: none"> Continuous daily rainfall-runoff and nutrient mass balance modelling using MUSIC (or equivalent) used to derive average annual values.
Background Pollutant Loads / Concentrations	<ul style="list-style-type: none"> Sourced from Chapter 2 of Fletcher <i>et al</i> (2004). Acceptable export rates / concentrations sourced from published local studies. Site specific data should be collected to support modelled loads.
Surface and Subsurface Pollutant Export	<ul style="list-style-type: none"> Use of relevant equations in the Technical Manual to calculate a site specific catchment attenuation factor to surface and subsurface on-site loads based on site specific characteristics of the receiving environment.² Mass balance combining attenuated on-site system flows and loads with catchment inputs.
Environment and Health Protection Targets ³	<ul style="list-style-type: none"> No more than 10% increase in average annual nitrogen and phosphorus loads (kg/year) based on existing undeveloped background loads. All land application areas sized to prevent hydraulic failure (surcharging) in 50% of years.

Note 1: Fletcher *et al* (2004) available from <http://www.catchment.crc.org.au/pdfs/technical200408.pdf>.

Note 2: Refer to Section 7.5.5 of the Technical Manual for explanation of attenuation factor derivation.

Note 3: Site specific targets can be developed and justified on a case by case basis. Outcomes must meet or exceed those achieved by the above targets.

3 NON-DOMESTIC DEVELOPMENT

For the purposes of this DAF, non-domestic development can be defined as any unsewered development involving one or more of the following;

- commercial or industrial activities;
- institutional facilities (e.g. schools, community halls, recreation facilities); and
- on-site / decentralised sewage management systems for residential flows greater than 2,000 L/day.

Non-domestic development may involve construction of a single on-site wastewater management system, multiple facilities to receive different waste streams (e.g. trade or food processing waste) or a decentralised community wastewater system comprising collection, treatment and potentially effluent management. Non-domestic systems may also involve collection of wastewater from a subdivision or commercial/industrial development and conveyance to an existing sewerage system.

Non-domestic developments typically generate wastewater with unique and variable characteristics that require site specific consideration to ensure efficient operation and adequate protection of ecosystems and human health. They also typically involve development of a large proportion of site area leaving limited space for sustainable effluent management. In some cases, site activities also increase the potential for exposure of the public to untreated or treated wastewater.

Very few domestic scale on-site sewage management systems are capable of servicing non-domestic facilities >2,000 L/day whilst meeting Council objectives in the long-term without alteration through site specific design.

Under Section 68 of the *Local Government Act 1993*, Council are the responsible authority for approval to install, alter and operate systems of sewage management not licensed under the *Protection of Environment Operations Act (1997)*. This can include systems receiving up to 750 kL/day or 2,500 Equivalent Persons (EP).

The DAF for non-domestic systems reflects the increased influence system size and complexity has on sustainability in comparison to land capability. As design wastewater flows and loads increase, the level of detail required for investigation and design of systems also increases.

3.1 Low and Medium Hazard Allotments (<10 kL/day)

DAF requirements for non-domestic systems on Low and Medium Hazard allotments reflect the higher risk associated with a larger flow system. Even on unconstrained lots, non-domestic systems still have the potential to cause significant impact and historically have been prone to poor design, construction, operation and maintenance. Assessment and design requirements for Low and Medium Hazard allotments are also restricted to smaller non-domestic systems with an average design wastewater flow of <10 kL/day.

Table 3-1 Non-Domestic Low/Medium Hazard Assessment Criteria¹

	Acceptance Criteria ²	DAF Section
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer?	3.1.1
	Site and soil assessment undertaken in accordance with Minimum Standards set out in Section 3.1.1 and documented in a Wastewater Management Report by a suitably qualified and experienced wastewater consultant.	
System Selection and Sizing	Summarise potential treatment and land application systems considered and justify preferred option in the Wastewater Management Report.	3.1.2
	Site specific wastewater characterisation based on best available information including seasonal variation.	
	Site specific design and performance criteria confirmed based on guidelines and reported performance.	
	Brief process design outlining rationale, performance and capacity to manage flow and loads.	
	Sizing of land application systems using most limiting of monthly soil water and annual nutrient balance.	
	Preliminary hydraulic design of collection, treatment and land application components.	
	Site plan prepared in accordance with Council's Minimum Standard	Table 3-3
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form?	3.1.3
	Attendance at a pre-approval site meeting by a Council officer, designer and owner.	
	Preparation of a 1-2 page Constructability Assessment by a preferred installer confirming the capacity to install the proposed system and approximate cost range	
Cumulative Impacts	Assessment must demonstrate achievement of buffer distances and demonstrate sufficient useable land.	3.1.4
Commissioning and Performance Validation	Preparation of schematic as-built drawing of all system components.	3.1.5
	Certification by installer that the system has been constructed in accordance with the design.	
	Validation monitoring that consists of monthly sampling as described below.	
	Preparation and submission of an Operation, Monitoring and Maintenance Plan to Council for approval.	

Note 1: Limited to systems with an estimated Average Dry Weather Flow (ADWF) <10 kL/day on Low/Medium Hazard allotments.

Note 2: Council have no Acceptable Solution options for Non-Domestic systems. Site specific assessment and design is required.

3.1.1 Site and Soil Assessment

Non-domestic wastewater management systems are not suitable for adoption of Acceptable Solution options or standard designs. This also applies to site and soil assessment where the nature of the wastewater being generated can compound with normally minor or moderate bio-physical constraints to increase risk of design and performance failure significantly in comparison to domestic systems.

Use of Council's Site and Soil Pro-forma will not be accepted for any non-domestic application to install a wastewater management system or for an unsewered increase in building entitlements involving non-domestic systems. Site and soil procedures shall follow procedures set out in Table 3-3 and Table 6-1.

Given that a comprehensive site specific assessment is required for non-domestic systems on Low and Medium Hazard lots, no Acceptable Solution criteria have been assigned. Wastewater consultants must describe and assess site and soil characteristics in sufficient detail to allow Council to identify the key constraints that must be addressed in the design of the on-site sewage management system. Wastewater Management Reports must then clearly explain how the adopted system design overcomes the nominated constraints (described in more detail in Section 3.1.2).

Site and soil assessment procedures for non-domestic systems on Low / Medium Hazard allotments should clearly follow nationally recognised standards and guidelines for soil and land survey and on-site sewage management. They should include references to specific procedures undertaken and classification systems used to describe and assess conditions. Refer to Table 6-1 for acceptable standards and guidelines for site and soil assessment procedures. Where individual components of a site and soil assessment are not supported with references to these guidelines and standards, Council may request further justification for Wastewater Management Report outcomes. **Failure to provide this information will result in refusal of the application for non-domestic systems/allotments.**

As a minimum, all of the site and soil parameters described in Table 6-1 must be included in an assessment for non-domestic systems on Low / Medium Hazard allotments. It is not adequate to simply list/state the observed or measured value for each parameter. A brief but clear explanation of the implications of the observed / measured value for the on-site system design must be included in the site and soil assessment.

3.1.2 System Selection and Sizing

Given the unique and variable nature of non-domestic wastewater sources, site specific design calculations must be included in a Wastewater Management Report prepared by a suitably qualified / experienced environmental or engineering consultant. This will assist in selection of a system design capable of overcoming observed constraints. To this end, use of the Acceptable Solution Tables is not considered sufficient for any non-domestic systems (regardless of Hazard Class). System selection and design should follow a feasibility and process design procedure reflective of good engineering practice as set out in Crites and Tchobanoglous (1998) and Section 9.5 of the *GTCC On-site Sewage Technical Manual*.

The specific structure and content of system selection and design outcomes for these systems shall follow that set out in the minimum standards for preparation of Wastewater Management Reports in Table 3-3.

3.1.3 Constructability

In addition to provision of a signature from the property owner/applicant and attendance by relevant parties at a site meeting (as described in Section 1.3.3), applications for non-domestic systems on Low / Medium Hazard allotments will require a written Constructability Assessment to be submitted to Council. A Constructability Assessment is a brief (e.g. 1-2 pages) report prepared by an installer / technology provider of medium scale on-site wastewater management systems to provide Council (and the property owner) with a documented professional opinion on the constructability and serviceability criteria listed in Table 3-2. This includes a general cost estimate for construction/installation and operation of the proposed system.

The Assessment should be undertaken by a company capable of installing / constructing the type of system proposed. A Constructability Assessment is not intended to be exhaustive or unnecessarily large but should document a professional assessment of what the owner (or future) owner of the system can expect during construction and operation. Minimum Standards for a Constructability Assessment are described in Table 3-2.

Table 3-2 Minimum Standards for Constructability Assessments

Constructability / Serviceability Element	Minimum Standard
Degree of difficulty	<ul style="list-style-type: none"> Nomination of the degree of difficulty (easy, non-standard or difficult) and comparison of the relative degree of difficulty when compared to alternative on-site system options considered. Identification of critical design elements / system components that will require non-standard or complex installation/construction procedures.
Land area requirements	<ul style="list-style-type: none"> Statement confirming the total land area requirement of the proposed on-site sewage management system and the proportion of total allotment area occupied by the system.
Construction/installation costs	<ul style="list-style-type: none"> Estimated cost range including a breakdown of significant components (e.g. treatment unit, land application pipework, excavation, fill e.t.c.).
Operational costs	<ul style="list-style-type: none"> Approximate annualised cost for operation, monitoring and maintenance of the selected on-site system. Timeframe for replacement of critical components.
Owner responsibilities	<ul style="list-style-type: none"> Bullet point list of both regular and intermittent operation and maintenance activities associated with the system (including land application area). Identification of who will complete each task.

3.1.4 Cumulative Impacts

Applications for non-domestic systems on Low / Medium Hazard allotments have the potential to increase total wastewater loads discharged to a particular sub-catchment by a significant proportion. Such applications will be deemed to comply from a cumulative impact perspective where they meet the following conditions.

- The applicant demonstrates that sufficient, *useable* land area exists to fit a properly designed and sized system to service the proposed non-domestic facility in the long-term; and
- the proposed Effluent Management Areas (EMAs) ensure land application areas will comply with recommended buffer distances listed in Table 6-8.

Where an application for an unsewered non-domestic development on a Low / Medium Hazard allotment does not meet the two deemed to comply criteria, a Standard CIA will be required as described in Section 2.7.1. Please note that given the significant variation in the types and sizes of non-domestic on-site systems observed, Council may, at its discretion, request a less or more stringent level of assessment in relation to cumulative impacts. Such decisions will be made based on site specific conditions.

Table 3-3 Minimum Standard for Wastewater Management Reports:

NON-DOMESTIC SYSTEMS (ADWF <10 kL/day) Minimum Standard for Low/Medium Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Description of proposed facility (including equivalent persons). Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Summary of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with DECCW (2004), AS/NZS 1547:2012. Brief and clear explanation of the implications of observed site and soil features for system design and performance. Brief assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table 1-2 paragraphs Table(s), minimum 3 soil test pits per soil facet. Bullet point list of recommended design elements to overcome constraints. 1-2 paragraphs
System Selection	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered including advantages and limitations. Brief statement justifying selection of potential treatment and land application systems. 	<ul style="list-style-type: none"> Table. Paragraph.
Design	<ul style="list-style-type: none"> Site specific wastewater characterisation based on best available published or local information including consideration of seasonal / monthly variation. Establish site specific design criteria based on typical / published performance. Brief process design outlining rationale, assumed performance and capacity to manage design flows and loads. Process performance should be supported by published data or information that demonstrates the suitability of the process to the site and development. Sizing of land application systems using the most limiting of monthly soil water and annual nutrient balances (see Technical Manual). Preliminary hydraulic design of collection, treatment and land application components. 	<ul style="list-style-type: none"> Seasonal / monthly time series of flow and loads and 1-2 paragraphs + table justification (refer to Section 9 the <i>Technical Manual</i>). Paragraph and bullet points. 1-2 pages including supporting tables and figures. Tables summarising inputs, assumptions and results and paragraph justifying calculations. Tables and process schematic.
Site Plan	<ul style="list-style-type: none"> Location of boundaries, buildings, swimming pools, paths, groundwater bores, dams and waterways; Location / extent of all system components (including any reserve areas); Two metre elevation contours; and Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> Minimum Site Plan (1:500).
Cumulative Impacts (When required)	<ul style="list-style-type: none"> Summary of approach taken and confirmation of compliance with the Minimum Standards documented in 3.1.4. Methodology documenting the basis and source of input data including reference to site specific data, published information or the <i>Technical Manual</i> to justify use. Results demonstrating compliance with local water quality objectives and adequate management of health risk as defined and demonstrated in Section 10 of the <i>Technical Manual</i>. Brief discussion of long-term risks to health and environment and recommended management measures to address impacts. 	<ul style="list-style-type: none"> Up to 1 page. 2-4 pages of tables, figures and text (refer to the <i>Technical Manual</i>). 1-2 pages of tables, figures and text (refer to the <i>Technical Manual</i>). Up to 1 page.
Appendices	<ul style="list-style-type: none"> Soil bore logs for all test pits and raw laboratory results. All design calculations and assumptions including screenshots of cumulative impact spreadsheets/models. 	N/A

3.1.5 Commissioning and Performance Validation

Given the site specific nature of non-domestic on-site systems, greater consideration of system commissioning and performance validation is required. This will ensure the wastewater management system design approved is translated into a successfully operating system. Council's Minimum Standards for system commissioning and performance validation for Low/Medium Hazard non-domestic systems (<10kL/day) are summarised in the following table.

Table 3-4 Minimum Standards: Commissioning / Validation of Low/Medium Hazard

NON-DOMESTIC SYSTEMS (ADWF <10 kL/day) Minimum Standard for Low/Medium Hazard Commissioning / Performance Validation		
Element	Minimum Standard	Nominal Level of Detail
As-built Drawings	<ul style="list-style-type: none"> Schematic diagram showing the approximate location and process design of: <ul style="list-style-type: none"> All pipework and valves: Treatment and storage tanks / components: Land application components: Electrical / controls: and Reuse components (where applicable). 	A4 schematic (not to scale) diagram.
Certification of Installation	<ul style="list-style-type: none"> Written statement from installer declaring that the system has been installed / constructed in accordance with Council's conditions of approval. 	N/A
Validation Monitoring	<ul style="list-style-type: none"> System operator to complete the following monitoring and analysis for a three month period: <ul style="list-style-type: none"> daily wastewater volumes entering / discharging from the system: weekly pH and turbidity reading for final effluent: weekly visual confirmation of proper function of each system component: monthly influent quality sampling for BOD₅, TSS, TN, TP, pH and Faecal coliforms: monthly effluent quality sampling for BOD₅, TSS, TN, TKN, TON, TP and Faecal coliforms System operator to analyse and summarise the outcomes of this monitoring and confirm the installed system is operating to specification and council's conditions of approval. Other, site specific validation monitoring as required at the discretion of Council or the system designer. 	<ul style="list-style-type: none"> Manual readings of water supply meters, installation of smart meters. Turbidity tube and hand held pH Procedure to be documented in OM&M Manual. Other parameters as required based on any site specific factors. Brief (3-5 pages) letter report to be submitted to Council.
Operation, Monitoring and Maintenance Plan	<ul style="list-style-type: none"> Must include as-built drawing(s) and a step by step description of each system component, operation and performance expectations. Establish minimum daily, weekly and monthly OM&M tasks through use of checklists. Troubleshooting advice / Frequently Asked Questions. Contact details for key personnel including service and maintenance technician(s), site operator and emergency contact. Details of performance validation monitoring. 	<ul style="list-style-type: none"> Schematic site plan (not to scale) OM&M Plan nominal 10-30 pages. <p>Level of detail commensurate with size and complexity of the system.</p>

3.2 High and Very High Hazard Allotments plus all Systems with ADWF 10-100 kL/day

The DAF requires more comprehensive assessment and design procedures to be adopted for non-domestic systems on High to Very High Hazard allotments. Site constraints and the significant variation in wastewater flows and loads typically observed with non-domestic systems can compound to create increased risks of system failure and ecosystem / health impacts. **Included in this classification are all systems with an average dry weather flow between 10-100 kL/day, regardless of hazard class.** This reflects the higher potential for impact associated with larger sized systems and the higher level of engineering and science expertise required for assessment and design.

Table 3-5 Non-Domestic High/Very High Hazard Assessment Checklist^{1,2}

	Acceptance Criteria ³	DAF Section
Site and Soil Assessment	On-site Sewage Management Hazard Class confirmed by the designer/installer? Site and soil assessment undertaken in accordance with Minimum Standards set out in Section 3.2.1 and documented in a Wastewater Management Report by a suitably qualified and experienced wastewater consultant.	3.2.1
System Selection and Sizing	Preliminary design calculations for a minimum 2-4 options accompanied by NPV assessment. Summarise potential treatment and land application systems considered and justify preferred option in the Wastewater Management Report. Detailed wastewater characterisation including temporal variation using existing data for subject site or similar facilities. Site specific design and performance criteria confirmed based on guidelines and reported performance. Process design outlining rationale, performance and capacity to manage flow and loads. Sizing of land application systems using daily soil water, nutrient and pathogen modelling. Hydraulic design of collection, treatment and land application components. Design drawings (CAD or similar) and specifications for all system components. Site plan prepared in accordance with Council's Minimum Standard	3.2.2
Constructability	Owner / applicant has signed the statement within the Section 68 Application Form? Attendance at a pre-approval site meeting by a Council officer, designer and owner. Preparation of a 1-2 page Constructability Assessment by a preferred installer confirming the capacity to install the proposed system and approximate cost range.	3.2.3
Cumulative Impacts	Standard Cumulative Impact Assessment completed in accordance with the DAF by a suitably qualified consultant. Establishment of an easement over the proposed Effluent Management Area (EMA) as described in Section. Assessment must demonstrate achievement of buffer distances, demonstrate sufficient useable land and achievement of long-term ecosystem and health protection objectives.	3.2.4
Commissioning and Performance Validation	Preparation of as-built drawings of all system components. Certification ⁴ by installer and designer that the system has been constructed in accordance with the design. Performance validation monitoring as described in 3.2.5 for either; a) systems on High/Very High Hazard lots with ADWF < 10 kL/day; or be) all systems with ADWF > 10 kL/day. Preparation and submission of an Operation, Monitoring and Maintenance Plan to Council for approval.	3.2.5

Note 1: Limited to systems with an estimated Average Dry Weather Flow (ADWF) <100 kL/day on High/Very High Hazard allotments.

Note 2: Includes Systems with an estimate ADWF 10-100 kL/day irrespective of Hazard Class

Note 3: Council have no Acceptable Solution options for Non-Domestic systems. Site specific assessment and design is required.

Note 4: This certification consists of a written declaration from either the designer or installer of an on-site wastewater management system. It is not a certification recognised under the National Construction Code (2011) and does not replace the need to obtain these certifications.

3.2.1 Site and Soil Assessments

Applications to install or alter an on-site sewage management system for non-domestic systems on High and Very High Hazard allotments cannot use the Council site and soil assessment pro-forma. Similarly, any on-site or community wastewater management system with an Average Dry Weather Flow (ADWF) greater than 10 kL/day must also adhere to these site and soil assessment procedures. They must be supported by a Wastewater Management Report prepared in accordance with AS/NZS 1547:2012 and the NSW guidelines *Effluent Use by Irrigation* (DECCW, 2004). This report should document a comprehensive site and soil assessment process in addition to presenting design assumptions/calculations and a concept design for the proposed sewage management system. Minimum Standards for site and soil assessment are contained in Table 6-1. Specific minimum requirements for non-domestic systems on High / Very High Hazard lots and systems with ADWF 10-100 kL/day are listed in Table 3-7. Further details on the required content and structure of Site and Soil assessment are provided in Table 6-1 of this document.

Given that a comprehensive site specific assessment is required for all High and Very High Hazard lots, no deemed to comply criteria have been assigned. Wastewater consultants must describe and assess site and soil characteristics in sufficient detail to allow Council to identify the key constraints that must be addressed in the design of the on-site sewage management system. Wastewater Management Reports must then clearly explain how the adopted system design overcomes the nominated constraints (described in more detail in Section 3.2.2).

Site and soil assessment procedures for High / Very High hazard allotments should clearly follow nationally recognised standards and guidelines for soil and land survey and on-site sewage management. They should include references to specific procedures undertaken and classification systems used to describe and assess conditions. Refer to Table 6-1 for acceptable standards and guidelines for site and soil assessment procedures. Where individual components of a site and soil assessment are not supported with references to these guidelines and standards, Council may request further justification for Wastewater Management Report outcomes. **Failure to provide this information will result in refusal of the application for High and Very High Hazard allotments.**

As a minimum, all of the site and soil parameters described in Table 6-1 must be included in an assessment for High and Very Hazard allotments. It is not adequate to simply list/state the observed or measured value for each parameter. A comprehensive and clear explanation of the implications of the observed / measured value for the on-site system design must be included in the site and soil assessment. **Failure to provide this explanation will result in refusal of the application for High and Very High Hazard allotments.**

In addition to the requirements outlined above, site and soil assessment procedures for non-domestic systems on High / Very High Hazard allotments may also require constant head permeability testing in accordance with *AS/NZS1547:2012*. Results should be used to develop a site specific estimate for saturated hydraulic conductivity and subsequently design loading rates.

Site and soil assessors should be aware that due to the highly variable and constrained nature of Very High Hazard lots, Council may request additional investigations on a site specific basis not included in the DAF Minimum Standards. As such, consultants should seek to be proactive in identifying any site specific constraints that require more detailed analysis.

3.2.2 System Selection and Sizing

Given the unique and variable nature of non-domestic wastewater sources, site specific design calculations must be included in a detailed Wastewater Management Report prepared by a suitably qualified / experienced environmental or engineering consultant. The consultant must have experience in non-domestic scale systems. This will assist in selection of a system design capable of overcoming observed constraints. To this end, use of the Acceptable Solution Tables is not considered sufficient for any non-domestic systems (regardless of Hazard Class). System selection and design should follow a feasibility and process design procedure reflective of good engineering practice as set out in Crites and Tchobanoglous (1998) and Section 9.5 of the *GTCC On-site Sewage Technical Manual*.

For non-domestic systems on High / Very High Hazard allotments **or** any non-domestic system with ADWF 10-100 kL/day, a specification should be provided that clearly describes all system components to a sufficient level of detail to allow tendering for design and construction. This will ensure Council can readily understand the full extent of the proposed system. The specific structure and content of system selection and design outcomes for these systems shall follow that set out in the minimum standards for preparation of Wastewater Management Reports in Table 3-7.

Daily soil water and nutrient modelling must be used in conjunction with one dimensional viral die-off modelling in shallow groundwater to size land application systems. Reference should be made to Section 9 of the *GTCC Technical Manual* for specific guidance. The following performance targets must be met in sizing the land application area.

- No hydraulic surface surcharge in an average rainfall year:
- Average annual nutrient concentrations in deep drainage are no more than 10% higher than existing background pollutant levels as calculated using the approach recommended in Section 10 of the *GTCC On-site Sewage Technical Manual*;
- total viral dieoff in shallow groundwater prior to any water supply bores or receiving waters as calculated by Cromer *et al* (2001) as cited in the *GTCC On-site Sewage Technical Manual*.

3.2.3 Constructability

In addition to provision of a signature from the property owner/applicant and attendance by relevant parties at a site meeting (as described in Section 1.3.3), applications for non-domestic systems will require a written Constructability Assessment to be submitted to Council. A Constructability Assessment is a brief (e.g. 1-2 pages) report prepared by an installer / technology provider of medium scale on-site wastewater management systems to provide Council (and the property owner)

with a documented professional opinion on the constructability and serviceability criteria listed in Table 3-6. This includes a general cost estimate for construction/installation and operation of the proposed system.

The Assessment should be undertaken by a company capable of installing / constructing the type of system proposed. A Constructability Assessment is not intended to be exhaustive or unnecessarily large but should document a professional assessment of what the owner (or future) owner of the system can expect during construction and operation. Minimum Standards for a Constructability Assessment are described in Table 3-2.

Table 3-6 Minimum Standards for Constructability Assessments

Constructability / Serviceability Element	Minimum Standard
Degree of difficulty	<ul style="list-style-type: none"> Nomination of the degree of difficulty (easy, non-standard or difficult) and comparison of the relative degree of difficulty when compared to alternative on-site system options considered. Identification of critical design elements / system components that will require non-standard or complex installation/construction procedures.
Land area requirements	<ul style="list-style-type: none"> Statement confirming the total land area requirement of the proposed on-site sewage management system and the proportion of total allotment area occupied by the system.
Construction/installation costs	<ul style="list-style-type: none"> Estimated cost range including a breakdown of significant components (e.g. treatment unit, land application pipework, excavation, fill e.t.c.).
Operational costs	<ul style="list-style-type: none"> Approximate annualised cost for operation, monitoring and maintenance of the selected on-site system. Timeframe for replacement of critical components.
Owner responsibilities	<ul style="list-style-type: none"> Bullet point list of both regular and intermittent operation and maintenance activities associated with the system (including land application area). Identification of who will complete each task.

3.2.4 Cumulative Impacts

Applications for non-domestic systems on High / Very High Hazard allotments and non-domestic systems with ADWF between 10-100 kL/day shall be deemed to comply from a cumulative impact perspective where they meet the following conditions.

- Scale detailed design drawings (prepared in CAD or similar) shall be provided with the design to demonstrate that sufficient, *useable* land area exists to fit a properly designed and sized system to service the proposed non-domestic facility in the long-term;
- A Standard Cumulative Impact Assessment is completed to demonstrate risks are adequately managed (refer to **Error! Reference source not found.**, **Error! Reference source not found.** and the GTCC On-site Sewage Technical Manual); and
- the proposed Effluent Management Areas (EMAs) ensure land application areas will comply with recommended buffer distances listed in Table 6-8.

Minimum Standards for completion of a Standard Cumulative Impact Assessment are summarised in Section 2.7.1. An example methodology and case study demonstrating how a Standard CIA should be undertaken is provided in the GTCC On-site Sewage Technical Manual.

Where an application for an unsewered non-domestic development on a High / Very High Hazard allotment does not meet the three deemed to comply criteria, a Detailed CIA will be required (see Section 2.7.2 for details). Site specific monitoring data to support the design and CIA will be essential if Council are to approve such an application.

Table 3-7 Minimum Standard for Wastewater Management Reports

NON-DOMESTIC SYSTEMS (ADWF 10-100 kL/day) Minimum Standard for High/Very High Hazard Wastewater Management Reports		
Report Element	Minimum Standard	Nominal Level of Detail
Introduction and Background	<ul style="list-style-type: none"> Name, contact details and qualifications of author(s). Site location and owner. Allotment size (m² or ha). Proposed / existing water supply. Description of proposed facility (including equivalent persons). Availability of sewer. 	One page of text and tables.
Site and Soil Assessment	<ul style="list-style-type: none"> Broad overview of locality and landscape characteristics. Details of the date and time of assessment in addition to statements confirming the methods used to complete the assessment. Site assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Detailed review of available published soils information for the site. Soil assessment that considers all parameters listed in Table 6-1 of the DAF in accordance with <i>AS/NZS 1547:2012</i>. Where multiple soil facets are present the site plan should show the approximate boundary between facets. Detailed explanation of the implications of observed site and soil features for system design and performance. Assessment of the existing condition of the receiving environment and sensitivity to on-site system impacts. 	<ul style="list-style-type: none"> Paragraph and locality map. Paragraph or table Table(s) 1 page Table(s) Minimum 3 soil test pits per soil facet. Up to 1 page of explanation and recommended design elements to overcome constraints. Up to one page.
System Selection	<ul style="list-style-type: none"> Summarise potential treatment and land application systems considered including advantages and limitations. Preliminary design calculations for a minimum of 2-4 options. Brief statement justifying selection of treatment and land application system. 	<ul style="list-style-type: none"> Table. Summary table. Paragraph.
Design	<ul style="list-style-type: none"> Detailed wastewater characterisation (quality and quantity) including temporal variation using existing data for the subject site or similar facilities. Establishment of clear, site specific design criteria based on typical or published performance. Process design in accordance with Tchobanoglous and Burton (2003) or Crites and Tchobanoglous (1997) detailing the rationale, assumed performance and capacity to manage design flows and loads. Process performance should be supported by published data or information that demonstrates the suitability of the process to the site and development. Daily water, nutrient and pathogen modelling to size any land application areas (see GTCC Technical Manual). Hydraulic design of collection, treatment and land application components to demonstrate viability of the process. Design drawings (CAD or similar) and specifications for all system components. 	<ul style="list-style-type: none"> Monthly/daily time series of flow and loads and 1-2 paragraphs + table justification (refer to Section 9 the <i>Technical Manual</i>). 1 page and table. 2-4 pages including supporting tables and figures. Tables summarising inputs, assumptions and results and paragraph justifying calculations. Tables and process schematic. Scale drawings prepared in CAD (or similar) and engineering specification sufficient for detailed design and construction.

Site Plan	<ul style="list-style-type: none"> • Survey plan. • Proposed allotment boundaries, dimensions and area; • Location of existing buildings, swimming pools, paths, groundwater bores, dams and waterways; • Location of exclusion zones (e.g. setback distances and unsuitable site and soil conditions); • Location of all system components and any reserve areas to clearly demonstrate viability; • Half metre elevation contours; and • Location of existing and proposed drainage pipework (centreline). 	<ul style="list-style-type: none"> • Minimum Site Plan (1:500). CAD or similar.
Cumulative Impacts (Where required)	<ul style="list-style-type: none"> • Summary of approach taken and confirmation of compliance with the Minimum Standards documented in 3.2.4. • Methodology documenting the basis and source of input data including reference to site specific data, published information or the <i>Technical Manual</i> to justify use. • Results demonstrating compliance with local water quality objectives and adequate management of health risk as defined and demonstrated in Table 2-15 and Section 10 of the <i>Technical Manual</i>. • Brief discussion of long-term risks to health and environment and recommended management measures to address impacts. 	<ul style="list-style-type: none"> • Up to 2 pages. • 4-8 pages of tables, figures and text. • 4-8 pages of tables, figures and text. • Up to 4 pages.
Appendices	<ul style="list-style-type: none"> • Soil bore logs for all test pits. • Raw laboratory results for soil analysis. • All design calculations and assumptions including screenshots of cumulative impact spreadsheets/models. 	N/A

3.2.5 Commissioning and Performance Validation

Given the site specific nature of non-domestic on-site systems, greater consideration of system commissioning and performance validation is required. This will ensure the wastewater management system design approved is translated into a successfully operating system. Council's Minimum Standards for system commissioning and performance validation for High/Very High Hazard non-domestic systems (**including all systems 10-100 kL/day**) are summarised in the following table.

Minimum Standards have been split into two components to recognise some of the variation in scale and complexity observed in non-domestic systems. Please note that Council may at its discretion require more or less than included in the following Minimum Standards where site specific circumstances justify such a change.

Table 3-8 Minimum Standards: Commissioning / Validation of High/Very High Hazard Lots

NON-DOMESTIC SYSTEMS (ADWF <10 kL/day)		
Minimum Standard for High/Very High Hazard Commissioning / Performance Validation		
Element	Minimum Standard	Nominal Level of Detail
As-built Drawings	<ul style="list-style-type: none"> Scale site plan showing the approximate location and process design of: <ul style="list-style-type: none"> All pipework and valves: treatment and storage tanks / components: Land application components: Electrical / controls: and Reuse components (where applicable). 	A4 (to scale) site plan (based on survey). Wastewater management system components need not be surveyed.
Certification of Installation	<ul style="list-style-type: none"> Written statement from installer declaring that the system has been installed / constructed in accordance with Council's conditions of approval. Written statement from designer confirming that the system has been installed / constructed in accordance with the design. 	N/A
Validation Monitoring	<ul style="list-style-type: none"> System operator to complete the following monitoring and analysis for a three month period: <ul style="list-style-type: none"> daily wastewater volumes entering / discharging from the system: weekly pH and turbidity reading for final effluent: weekly visual confirmation of proper function of each system component: monthly influent quality sampling for BOD₅, TSS, TN, TP, pH and Faecal coliforms: monthly effluent quality sampling for BOD₅, TSS, TN, TKN, TON, TP and Faecal coliforms System operator to analyse and summarise the outcomes of this monitoring and confirm the installed system is operating to specification and council's conditions of approval. Other, site specific validation monitoring as required at the discretion of Council or the system designer. 	<ul style="list-style-type: none"> Manual readings of water supply meters, installation of smart meters. Turbidity tube and hand held pH Procedure to be documented in OM&M Manual. Other parameters as required based on any site specific factors. Brief (3-5 pages) letter report to be submitted to Council.
Operation, Monitoring and Maintenance Plan	<ul style="list-style-type: none"> Must include as-built drawing(s) and a step by step description of each system component, operation and performance expectations. Establish minimum daily, weekly and monthly OM&M tasks through use of checklists. Troubleshooting advice / Frequently Asked Questions. Contact details for key personnel including service and maintenance technician(s), site operator and emergency contact. Details of performance validation monitoring. 	<ul style="list-style-type: none"> Surveyed site plan (to scale) OM&M Plan nominal 10-30 pages. <p>Level of detail commensurate with size and complexity of the system.</p>

Table 3-9 Minimum Standards: Commissioning / Validation of 10-100 kL/day Systems

NON-DOMESTIC SYSTEMS (ADWF 10-100 kL/day)		
Minimum Standard for Commissioning / Performance Validation (Regardless of Hazard Class)		
Element	Minimum Standard	Nominal Level of Detail
As-built Drawings	<ul style="list-style-type: none"> Fully surveyed site plan showing the location and process design of: <ul style="list-style-type: none"> All pipework and valves: treatment and storage tanks / components: Land application components: Electrical / controls: and Reuse components (where applicable). 	A3 surveyed site plan (to scale).
Certification of Installation	<ul style="list-style-type: none"> Written statement from installer declaring that the system has been installed / constructed in accordance with Council's conditions of approval. Written statement from designer confirming that the system has been installed / constructed in accordance with the design. A written statement from any third party peer reviewer engaged as a requirement of Council during the application to install / DA process. 	N/A
Validation Monitoring	<ul style="list-style-type: none"> System operator to complete the following monitoring and analysis for a six month period: <ul style="list-style-type: none"> hourly wastewater volumes entering / discharging from the system: Daily (first 3 months) followed by weekly (second 3 months) pH and turbidity readings for final effluent: weekly visual confirmation of proper function of each system component: Weekly (first 3 months) followed by monthly (second 3 months) influent quality sampling for BOD₅, TSS, TN, TP, pH and Faecal coliforms: Weekly (first 3 months) followed by monthly (second 3 months) effluent quality sampling for BOD₅, TSS, TN, TKN, TON, TP and Faecal coliforms System operator to analyse and summarise the outcomes of this monitoring and confirm the installed system is operating to specification and council's conditions of approval. Third party peer review of Performance Validation will be required where a peer reviewer was engaged as a requirement of Council during the application to install / DA process. Other, site specific validation monitoring as required at the discretion of Council or the system designer. 	<ul style="list-style-type: none"> Installation of smart meter(s) that allow measurement of wastewater inputs (e.g. sub-metering of water supply). Turbidity tube and hand held pH or continuous logging. Procedure to be documented in OM&M Manual. Other parameters as required based on any site specific factors. 10-20 page report to be submitted to Council.
Operation, Monitoring and Maintenance Plan	<ul style="list-style-type: none"> Must include as-built drawing(s) and a step by step description of each system component, design capacities, operation and performance expectations. Establish minimum daily, weekly and monthly OM&M tasks through use of checklists. Troubleshooting advice / Frequently Asked Questions. Contact details for key personnel including service and maintenance technician(s), site operator and emergency contact. Details of performance validation monitoring. 	<ul style="list-style-type: none"> Schematic site plan (not to scale) OM&M Plan nominal 20-50 pages. <p>Level of detail commensurate with size and complexity of the system.</p>

3.3 On-site and Community Systems >100 kL/day

Any on-site or decentralised wastewater management system with an ADWF greater than 100 kL/day requires specialist input into assessment, design, approval and construction. This DAF does not provide specific direction on requirements for these systems. A general guide to approval processes for these systems is as follows.

- Council will require a comprehensive feasibility study to be undertaken that clearly justifies the preferred option of the applicant against realistic alternatives (including life cycle analysis).
- Development Applications (DA) will need to be accompanied by a preliminary design and environmental assessment justifying that the system is feasible and will meet ecosystem / health protection objectives.
- The *Section 68* application to install a wastewater management system shall be accompanied by a detailed design including drawings and specifications.
- Construction supervision and certification by a suitably qualified engineering consultant will be required.

Council may engage an independent consultant to complete a technical peer review of the application at the various project stages. The costs of this peer review will be borne by the applicant. Individuals or organisations considering submission of a DA for an activity that will generate more than 100 kL/day ADWF should contact Council at the earliest point to ensure they are fully aware of information requirements and performance objectives.

3.4 Non-Domestic Effluent Pump Out Systems

An effluent pump-out system utilizes a collection tank (collection well) that receives and stores liquid effluent once it has passed through a septic tank. A road tanker removes the stored liquid effluent on a frequency dependant on the hydraulic loading from the buildings connected to the system. The upfront costs for installation of effluent pump-out systems are generally less expensive than treatment systems but they cost significantly more to operate over the life of the system due to on-going pumping and disposal costs.

Tanker removal systems can be subject to ongoing issues involving noise, odour, increased truck movements, increased damage to local roads and misuse and abuse by property owners. There are also limits on the volume of sewage from tankers that can be accepted at local Mid Coast Water wastewater treatment plants. In essence, effluent pump-out systems are not a sustainable long-term sewage management option. Council will only permit the installation of an effluent pump-out system in a restricted set of circumstances. This section of the DAF sets out situations where effluent pump-out systems will be considered and Minimum Standards for their approval.

Council advocates on-site sewage systems as a legitimate long-term management options where appropriate and sustainable. They should only be used as temporary “stop gap” solutions where Council and/or Mid Coast Water have identified some form of centralised or community wastewater management as the preferred long-term servicing option. Effluent pump-out should not be used to enable inappropriate or unsustainable development in unsewered areas. Notwithstanding, consideration will be given to pump-out systems where Council have previously approved development (based on previous, less stringent standards) that is no longer considered sustainable.

The following table summarises the types of allotments and non-domestic developments where effluent pump-out systems will be considered. **Effluent pump-out systems will not be considered for any rezoning, unsewered subdivision (or other increase in building entitlements) or multi-unit development application. They will only be considered for existing unsewered building entitlements where a sustainable on-site sewage management option is not viable.**

Table 3-10 Where Effluent Pump-out Systems will be considered in non-domestic situations

Development Scenario	Low to High Hazard >4,000m ² Useable Land	High Hazard 2,000 – 4,000m ² Useable Land	Very High Hazard >4,000 m ² Useable Land	Very High Hazard <4,000m ² Useable Land
Non-residential	Not permitted		With justification ¹	

Note 1: Refer to Section 1.5.1 for a description of Minimum Standards for justifying effluent pump-out.

Note 2: Only permitted without further justification where the nearest sewer connection is >75 metres from the property or the property is located within a Mid Coast Water Corporation potable water supply protection area.

3.4.1 Minimum Standards for Justification of Effluent Pump-out

In situations where Council are willing to consider effluent pump-out “with justification” in Table 1-10, the following information must be submitted as a Minimum Standard for approval.

- A Wastewater Management Report prepared in accordance with Table 1-9 (residential) or Table 3-7 (non-residential) will need to be submitted to Council. The report will need to demonstrate that;
 - based on the outcomes of a site and soil assessment, there is insufficient area to contain a sustainable on-site sewage management service; and/or
 - an effluent land application area sized in accordance with Table 1-9/Table 3-7 and Section 9.4 of the GTCC On-site Sewage *Technical Manual* cannot realistically be installed on the site.
- A Constructability Assessment prepared in accordance with Table 1-8 will need to be submitted to Council that confirms that installation of an on-site sewage management system is not feasible.
- There may be situations where an on-site sewage management option is technically and environmentally feasible (based on the above assessments) but not the preferred option of the applicant. In these circumstances, the Constructability Assessment will need to include a Net Present Value assessment (20 year duration) that compares life cycle costs between an effluent pump-out and on-site sewage management option. This assessment must demonstrate that life cycle costs for the effluent pump-out system are significantly less than the on-site disposal option (in the order of 50% less expensive).

4 TECHNICAL PEER REVIEW OF APPLICATIONS

It should be noted that in any situation where Council have concerns about the suitability of a proposed on-site sewage management system or the validity of any information and calculations submitted, they may request a technical peer review be undertaken by an independent scientist or engineer with expertise in the field. This is particularly applicable to applications for individual systems (domestic or non-domestic) or unsewered increases in building entitlements on High and Very High Hazard allotments. In all cases, the costs of this peer review will be borne by the applicant. Applications that meet Acceptable Solution criteria will not require technical peer review.

5 ACCEPTABLE SOLUTIONS

This section sets out Council's Acceptable Solutions included in the DAF for unsewered development of Low and Medium Hazard allotments. The Acceptable Solutions offer an opportunity for applicants to select a wastewater servicing concept that is considered an effective and safe (conservative) option for the majority of Low and Medium Hazard lots. This allows Council to approve applications more promptly in the knowledge that the proposed system is designed to meet performance objectives.

The contents of this section (and Appendix A) are intended to be used as a reference once an applicant has determined their minimum requirements for supporting information to be provided with their application from the DAF. Users of the DAF should select the appropriate sections applicable to their application using the DAF checklists and Minimum Standards for Wastewater Management Reports (contained in Sections 1.1 to 2.5).

As explained in the preceding DAF Sections, Council have developed a suite of Acceptable Solutions for on-site sewage management that aim to streamline approval processes for systems proposed for Low and Medium Hazard allotments. It recognises that on lots with few constraints to sustainable on-site sewage management, the need for detailed investigations and design calculations is reduced. Council's Acceptable Solutions are considered conservative wastewater servicing options that provide a high level of assurance that our objectives will be met. Subject to some minimum and relatively simple information requirements for applications to install, use of an Acceptable Solution will typically result in prompt approval by Council.

The Acceptable Solutions are comprised of a set of common system types and sizes considered appropriate for specific site conditions. Essentially, the user can select a type of on-site system and minimum basal area for the land application area based on five fundamental characteristics of the development. For some development sites with very few constraints, a wide range of Acceptable Solution options will be available. For other, moderately constrained sites, some options may be excluded. The user should follow the decision key provided below to find the Acceptable Solution table that matches their site.

The rationale and methodology for development of the Acceptable Solution Tables is contained in Section 8 of the GTCC On-site Sewage Technical Manual.

Acceptable Solutions may only be used for domestic on-site sewage management systems proposed on Low to Medium Hazard allotments. The DAF does not however, prescribe use of Acceptable Solutions. Individual applicants are able to submit site specific designs subject to provision of the relevant supporting information and calculations applicable to that development. In the majority of cases site specific design will enable approval of smaller land application areas.

5.1 How to Use the Acceptable Solutions

Figure 5-1 illustrates the information required to allow selection of Acceptable Solutions for a specific site. Reference should be made to Figure 5-2 to determine which climate zone a site is located within. From this point the required information should be readily available from site and soil assessment and system design activities completed as part of the Low and Medium Hazard DAF.

Selection of the design soil class should be completed using the Design Loading Rate (DLR) tables in Appendix L and M of *ASNZS1547:2012*. The design soil class should be assigned based on the soil horizon with the most limiting DLR within 600mm of the base of the LAA or point of discharge.

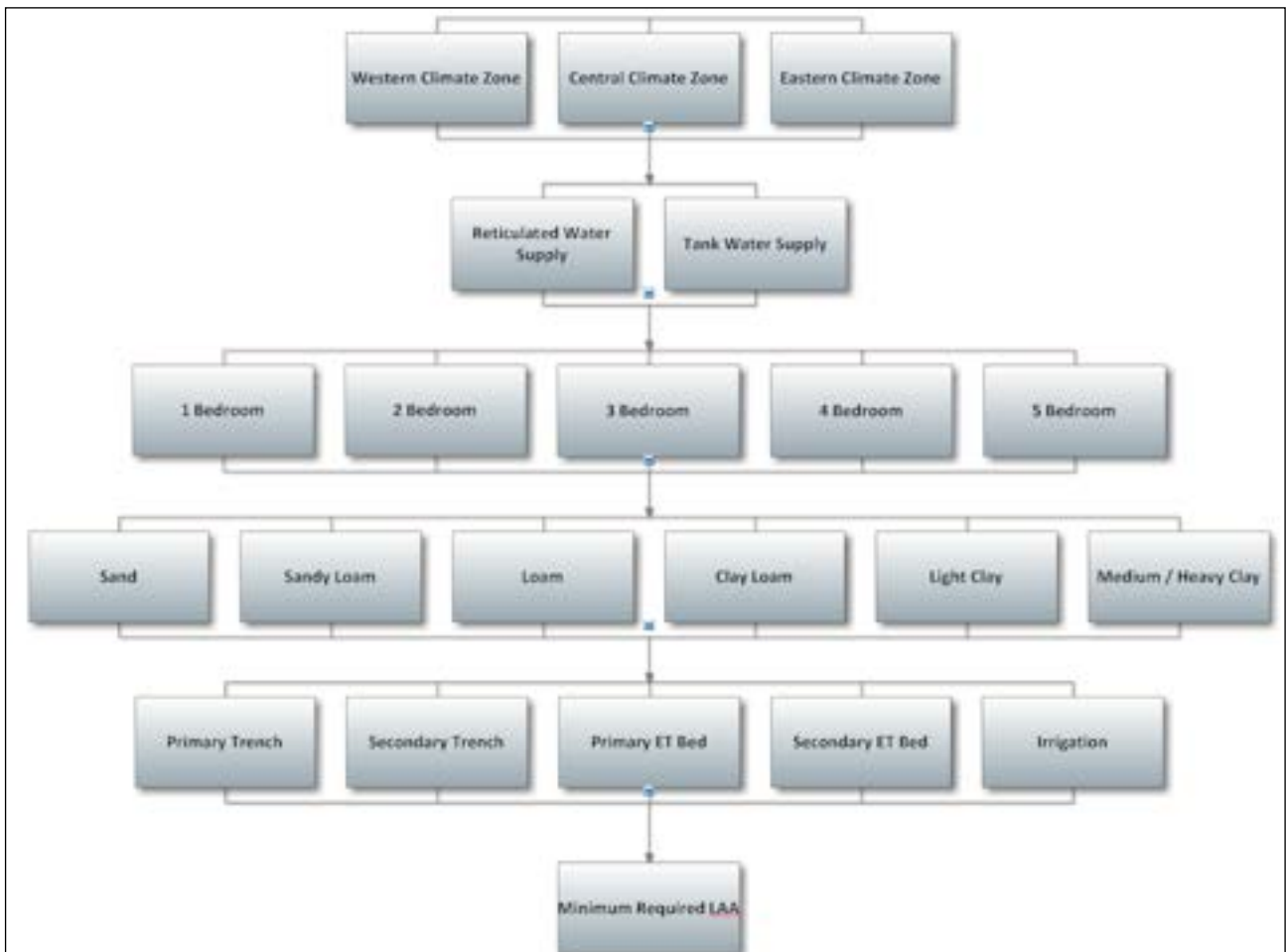
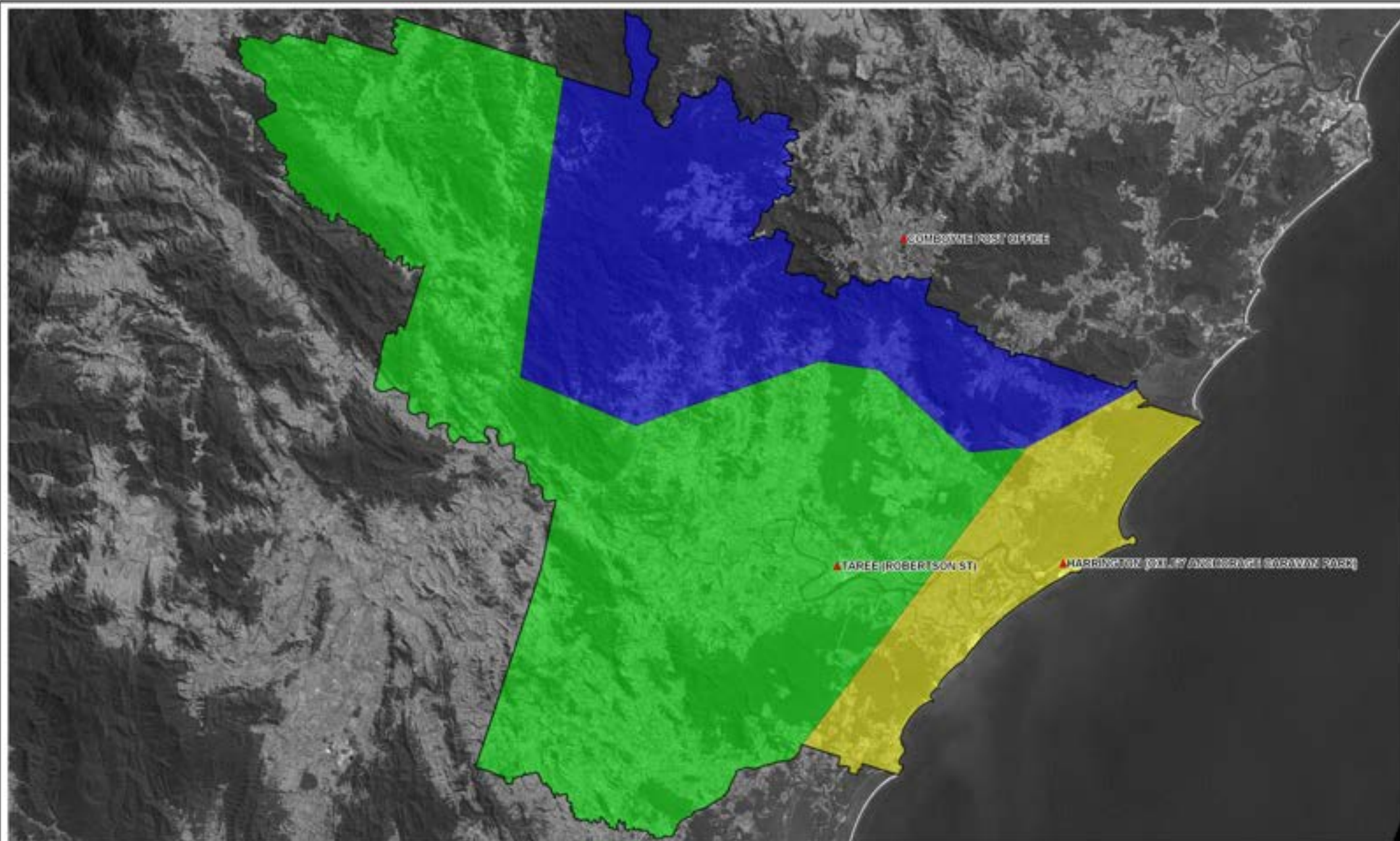


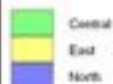
Figure 5-1 Decision Tree for Selection of Acceptable Solutions

Reference should then be made to Appendix A for selection of the applicable Acceptable Solution table.



LEGEND

Climate Zones



▲ BMT Rainfall Station

Title

Climate Zones for Acceptable Solution Tables

BMT WBM endeavours to ensure that the information provided in this map is correct at the time of publication. BMT WBM does not warrant, guarantee or make representations regarding the currency and accuracy of information contained in this map.



0 7.5 15km
Approx. Scale

Figure

5-2

Rev.

A



Filepath : K:\N2091_GTCC_Orsde_Sewage_Planning\B\Workspaces\CRG_009_Climate_Zones.vor

6 MINIMUM STANDARDS

These Minimum Standards provide performance based guidance and criteria that ensure various aspects of the design and construction of on-site systems are undertaken in accordance with Council's requirements. The contents of this section are intended to be used as a reference once an applicant has determined their minimum requirements for supporting information to be provided with their application from the DAF. Users of the DAF should select the appropriate sections applicable to their application using the DAF checklists and Minimum Standards for Wastewater Management Reports (contained in Sections 1 to 2.6). Minimum Standards are not prescriptive and allow flexibility in approaches

6.1 Minimum Standards for Site and Soil Assessment

Table 6-1 contains the guidance on minimum levels of investigation for site and soil assessments. This Minimum Standard is applicable to site and soil assessments completed for all unsewered developments excluding applications to install single on-site sewage management systems on Low and Medium Hazard lots. For these scenarios, Table 6-1 still provides comprehensive guidance to assist in use of the Site and Soil Pro-forma. The Minimum Standards also list additional resources and recognised standards the user can source to assist in submitting a suitable site and soil assessment.

Table 6-1 Minimum Standards for Site and Soil Assessment Procedures

Site or Soil Feature	Explanation	Additional Resources
Slope	The slope of the site, particularly the proposed Land Application Area (LAA), may be measured in the field by the site and soil assessor / installer using a clinometer or estimated using survey information or visual checks and reported in percent slope.	<i>Australian Soil and Land Survey Field Handbook (CSIRO, 2009)</i> and <i>AS1547:2012</i>
Exposure	This parameter should be determined in the field from noting the amount of tree cover (which provides shading), and the direction that the slopes face (aspect) where land application of effluent is likely to take place.	
Vegetation	The general type of vegetation cover over the proposed LAA should be recorded, preferably even specific species. An assessment of the coverage of vegetation on the ground surface and general vigour should be made.	
Flood Potential	If possible, information regarding the flood annual exceedence probability (AEP) elevations for the site should be detailed (Council has this information). In the field, proximity to watercourses (both intermittent and permanent) should be noted, as well as position in the landscape (for example on a floodplain).	Council flood planning engineer.
Run-on and Up-slope Seepage	Evidence of run-on to the proposed LAA should be noted (such as sediment dams on the surface). The presence of wet ground or seepage upslope should also be recorded.	<i>Australian Soil and Land Survey Field Handbook (CSIRO, 2009)</i> and <i>AS1547:2012</i>
Site Drainage	From the field investigation, a record of observation and a description of the shape of the land should be provided to indicate whether water will be shed or will soak in. This gives an evaluation of the surface drainage. Subsurface drainage can be determined by the presence of mottled colours in the soil profile, which indicates waterlogging. The moisture content of the soil during dry periods also reflects the capacity for drainage.	
Depth to Limiting Horizon	A hole or pit should be dug, by hand or machine, to at least 1.0 metres below the base of the LAA or to refusal. The depth of the excavation should be recorded, along with the depth of each distinctive soil layer or horizon. The presence of hardened layers (hardpans) should also be recorded.	
Buffer distances	When siting land application areas, buffer setbacks should be provided to various features as appropriate to the specific site. Guidance is provided in Table 6-8 on recommended (minimum standard) buffer distances. In the field, note the distance to relevant features from this table from both treatment systems and proposed LAAs. If the buffer distances differ from those recommended in Table 6-8 the proposed on-site system cannot be considered a deemed to comply Low Hazard system. In this case further justification will be required and the proposal may be assessed under a higher hazard DAF.	GTCC On-site Sewage Management Technical Manual (2010).
Depth to Groundwater (permanent or episodic)	If water enters the excavation from the surrounding soil the depth to which it comes should be recorded. Grey greyed or heavily mottled subsoils can also provide an estimate of permanent and episodic groundwater levels. Groundwater maps and bore logs, available from the NSW Office of Water website, can be included with the Pro-forma to support the application.	<i>Australian Soil and Land Survey Field Handbook (CSIRO, 2009)</i> and <i>AS1547:2012</i>
Soil Texture	The Pro-forma provides a table to record the texture of each layer of soil. The installer / site and soil assessor determines this by manipulating a small amount of moist soil (a bolus) between her/his fingers which an indication of the texture (relative amounts of sand, silt, loam and clay) of the soil sample. The technique for this procedure is described in McDonald <i>et al</i> (1990).	
Coarse Fragments	The size and percentage of coarse fragments (stones and segregations) in each soil layer should be recorded.	
Rocks and Rock Outcrops	The nature and amount of rock (particularly bedrock – both general size and percent coverage of site) protruding from the ground that is observed over the site should be recorded in the report.	
Presence of Fill	Any imported fill material should be identified and described. The fill maybe clean soil from nearby excavation or fill containing construction rubble or of a material that is poorly suited to land application. Fill should be described consistently with the natural soil profile.	

Site or Soil Feature	Explanation	Additional Resources
Soil Structure	Soil structure is the distinctness, size, and shape of the peds. A ped is a natural soil aggregate consisting of a cluster of primary particles and separated from adjoining peds by surfaces of weakness (Brewer, 1960). Soil structure should be described from a fresh vertical exposure (it cannot be taken from an augured hole). Further information on pedality may be found in McDonald et al (1990). At the very least, the degree (for example strong, moderate, or weak) of pedality of each layer, and the shape of the peds, should be shown in a report.	
pH	The pH of 1:5 soil/water suspensions is measured using a hand held pH/EC meter. Alternatively, samples may be sent to a laboratory for the test to be performed. The assessor should test the pH trend down through the profile, for example acid, neutral, or alkaline. Acid soils (pH < 5) or alkaline soils (pH > 8) may provide an unsuitable environment for plant growth, and the assessor may recommend the use of ameliorants (MAV, 2006).	
EC	The electrical conductivity of the saturated extract (ECE) is calculated by first measuring the electrical conductivity of 1:5 soils in water suspensions and using appropriate multiplier factors to convert EC (1:5) to ECE. This figure infers the salinity of the soil and its potential impact on plant growth. Assessors can measure it in the field with a hand-held meter or in the laboratory (MAV, 2006).	
Emerson Aggregate Class	The Emerson Aggregate Test is used to assess soil dispersability and susceptibility to erosion and structural degradation. It provides a simple, field based assessment of aggregate stability and dispersability.	Refer to <i>AS/NZS1547:2012</i> , <i>AS1289.3.8.1</i> and Hazelton and Murphy (2007)
Cation Exchange Capacity (Cations)	CEC is the capacity of the soil to hold and exchange cations. It is a major controlling agent of stability of soil structure, nutrient availability for plant growth, soil pH and other factors. A low CEC means the soil has a low resistance to changes in soil chemistry that are caused by land use (Hazelton and Murphy, 2007). The levels and relative proportions/ratios of the key cations (calcium, magnesium, potassium and sodium) can also provide useful information on the capacity of a soil to accept wastewater and potential amelioration measures.	Hazelton and Murphy (2007)
Exchangeable Sodium Percentage (ESP)	The proportion of sodium on the cation exchange sites reported as a percentage of exchangeable cations. Levels above 6% may cause soil structural problems and reduced permeability. ESP should be considered in conjunction with Emerson Aggregate Class and cation levels to determine the best management approach.	
Phosphorus sorption	Used to calculate the immobilisation of phosphorus by the soil. Sandy soils are mostly low in P sorption and need not be tested. Clay soils and soils high in iron and/or aluminium often have high P-sorption. The most useful information is obtained from a multi-point test.	

6.2 Wastewater Generation Allowances

For the purposes of estimating hydraulic load Table 6-2 provides basic wastewater allowances for key site activities. Further published wastewater generation rates are available in the following references.

- *ASNZS 1547:2012:*
- *NSW Health Septic Tank and Collection Well Accreditation Guideline (2001):*
- *Crites and Tchobanoglous (1998) Small and Decentralised Wastewater treatment Systems:*
- *USEPA (2002) On-site Wastewater Treatment Manual.*

Site specific design wastewater flows and loads are highly variable and all published values should be considered estimates. Conservatism should be applied when site specific data is not available to support designs.

Table 6-2 Summary of Key Wastewater Generation Allowances

Effluent Source	Wastewater Allowances (litres/person/day)	
	Reticulated Supply Bore Supply River/Creek Supply	Roof Supply
Residential	150	120
Motel (resident/guest)	150	120
Industrial (with shower)	43	-
Industrial (without shower)	27	-
Restaurants	28	-
Refer to AS1547: 2012 (Appendix H) and Septic Tank and Accreditation Guideline, December 2001 for further typical flow design allowances. Refer to Crites and Tchobanoglous (1998) for further guidance on non-domestic flow and load allowances.		

- **Reduction** in water allowances based on the installation of water reducing fixtures will generally **not** be considered.
- **Increase** in allowances will be considered where spa baths and other high water use fixtures are proposed.
- Where possible (for existing development on a reticulated supply) **actual water usage data** should be used for calculations. Make allowances for water use not directed to the sewage management facility (e.g. Garden use, car washing). Recent water use metering projects have typically identified external water consumption to constitute 25-30% of total water consumption.
- For development using a roof water supply consider the installation of a **water meter**.
- When calculating total hydraulic load - **equivalent population (EP)** is obtained by multiplying the number of bedrooms in the dwelling by a factor of 1.6. **Total hydraulic load** (daily) is calculated by multiplying the equivalent persons (residential) by the nominated daily water allowance figure OR multiplying the number of actual staff/employees (commercial/industrial) by the nominated daily water allowance figure.
- With commercial or industrial developments factor into the calculations **shift work and/or weekend work**. The DAF sets out requirements for more comprehensive design wastewater flow and load estimation for Very High Hazard and non-domestic sites.
- Facilities generating non-standard pollutant loads will also require special consideration.

6.3 Minimum Standards: Treatment Systems

In order to achieve regulatory performance objectives it is critical that the choice of the treatment system be matched to the environmental and topographical constraints of the property, the method of land application (if applicable), the future requirements of the property and the possible “re-use” requirements of the applicant. System selection should consider capital costs, operational and maintenance costs as well as system reliability and replacement component availability and costs (in essence, the life cycle costs). The constructability assessment process included in the DAF includes consideration by applicants of the capital and operating costs and obligations associated with a selected treatment system. Council needs to be satisfied that the selected treatment technology is an affordable and appropriate option for the proposed development that is unlikely to be subject to operational failure in the long-term.

In most cases, the effluent quality required to be produced for a site will be determined by the capability of a site to assimilate sewage and the sensitivity of the receiving environment. Constrained sites typically require higher levels of control over the dosing and distribution of wastewater and a cleaner effluent. Less constrained sites can typically be serviced by simpler systems producing a relatively lower quality effluent. Council (through this DAF) advocate selection of treatment systems on a ‘fit for purpose’ basis. Unless a site owner has a specific preference and motivation for operating their wastewater management system, a treatment system should only be as complex as it needs to be to allow safe and sustainable land application.

6.3.1 Effluent Quality

For the purpose of this document treatment systems will be defined in terms of minimum effluent quality standards. Table 6-3 includes minimum effluent quality standards and typical system types able to meet the specific standard. Many types of treatment systems are available commercially that are able to meet either secondary or advanced secondary effluent quality standards.

Table 6-3 Minimum Effluent Quality Standards

Treatment Standard	Minimum Effluent Quality (90% Percentile)		System Types Able to Meet Standard
Primary	None provided		<ul style="list-style-type: none">• Septic Tank
Secondary	Biochemical Oxygen Demand (BOD)	20mg/L	<ul style="list-style-type: none">• Standard Aerated Wastewater Treatment System (AWTS) ^a.• Some Wet Composting Systems ^b.
	Total Suspended Solids (TSS)	30mg/L	
	Thermotolerant Coliforms	30cfu/100mL	
Advanced Secondary	Biochemical Oxygen Demand (BOD)	10mg/L	<ul style="list-style-type: none">• Aerobic Sand (media) Filter (recirculating or single pass) ^c.• Some Biofilters ^d.• Some Mechanical Treatment Systems^d.• Textile Filters
	Total Suspended Solids (TSS)	10mg/L	
	Thermotolerant Coliforms	10cfu/100mL	
	Nutrients - Nitrogen (Total) Phosphorus (Total)	Council may require specific nutrient levels be achieved dependent on individual environmental conditions.	

NOTES

a. A standard AWTS will be considered a secondary treatment system unless the manufacturer/installer can produce effluent quality data that demonstrates the system can consistently achieve a higher level of treatment. The monitoring data will only be accepted by Council if it includes influent and effluent results, sampling and analysis is performed by a NATA accredited laboratory (or equivalent) and is representative of an extended monitoring period.

b. Wet composting treatment systems may be accepted as secondary treatment systems if the manufacturer/installer can produce effluent quality data that demonstrates the system can consistently achieve the required level of treatment. The data will only be accepted by Council if it includes influent and effluent results, sampling and analysis is performed by a NATA accredited laboratory (or equivalent) and is representative of an extended monitoring period. The installation of a suitable disinfection system will be required if surface or sub-surface land application is proposed.

c. Aerobic sand (media) filters must meet appropriate design standards acceptable to Council. The installation of a suitable disinfection system will be required if surface or sub-surface land application is proposed.

d. Biofilters and mechanical treatment systems may be accepted as secondary or advanced treatment systems if the manufacturer/installer can produce effluent quality data that demonstrates the system can consistently achieve the required level of treatment. The data will only be accepted by Council if it includes influent and effluent results, sampling and analysis is performed by a NATA accredited laboratory (or equivalent) and is representative of an extended monitoring period. The installation of a suitable disinfection system may be required if surface or sub-surface land application is proposed.

6.3.2 System Accreditation

It is a requirement that all domestic treatment and storage systems (less than 2,000 L/day) hold accreditation with NSW Health or other appropriate accreditation body. Additionally, domestic treatment and storage tanks are to be constructed in accordance with the relevant parts of Australian Standard AS1546. Domestic on-site sewage treatment systems can be designed and constructed on a site specific basis without accreditation (subject to Council approval) for an individual house.

All non-domestic systems and domestic systems greater than 2000 L/day do not require NSW Health accreditation. It is important to note that the accreditation issued for domestic on-site sewage management devices is restricted in this way. The use of multiple NSW Health accredited domestic treatment units to manage non-domestic and >2000 L/day facilities will not remove the need for a site specific process design (see Section 2.5) and engineering assessment.

6.3.3 Sand Filters and Reed Beds

"Off the shelf" proprietary reed bed and sand filter systems require accreditation by NSW Health. Site specific designs for reed beds should be designed in accordance with good practice. Reference should be made to the *GTCC On-site Sewage Technical Manual* for specific design standards and guidelines.

Generally, reed beds are not a disposal system on their own (although do take up some effluent) but are used to reduce the quantity of wastewater requiring disposal and to improve the quality of the final effluent produced. This does not eliminate the need for a properly designed land application system.

6.3.4 Composting Systems

Depending upon the composting system selected, the compost may be suitable for utilisation in the garden of domestic premises. However, many systems require the humus removed from the WCT to be buried or otherwise placed within a conventional compost heap/bin for a further maturation period (generally around 3 - 6 months). After this time, the compost produced should be relatively inoffensive and may be used as a soil conditioner.

Wastewater generated in the house from kitchen and bathroom areas are not treated through the composting system and require a separate system for greywater disposal. Excess liquid, which drains from the composting system must be disposed of by sub-soil soakage within the boundary of the property. This system must be designed to accept hydraulic and nutrient loads as is the case for an all-waste land application system.

6.3.5 Greywater Treatment and Diversion

Greywater treatment devices must be accredited by NSW Health. Greywater treatment systems collect, treat and disinfect household greywater from the laundry, bath and shower for re-use in gardens. Greywater can be infectious and without disinfection it must not be used above ground. As greywater is rich in sodium (by product of detergents) the absorptive properties of the soil need to be treated to improve percolation. A separate OSM facility is required for blackwater.

With the exception of pre-filtration, greywater diversion systems do not normally incorporate facilities for the treatment or disinfection of the wastewater prior to discharge to the land disposal area. Accordingly, depending upon its source, the greywater quality may be very poor and a risk to public and environmental health.

Unless greywater is treated to a very high standard, it will turn septic if allowed to be stored. This gives rise to offensive odours and provides conditions favourable for micro-organisms to multiply. Thermotolerant coliform have been found to multiply by 10 to 100 times during the first 24 to 48 hours of storage before gradually declining. Significant levels of pathogens have been found in stored greywater after eight days (NSW Health "Greywater Reuse in Sewered Single Domestic Premises – April 2000"). For these reasons, diverted non-treated greywater must not be stored for later re-use.

Greywater diversion devices must be installed by a licensed plumber in accordance with *Greywater Reuse in Sewered Single Domestic Premises* (NSW Health, 2000). It is the responsibility of the property owner to ensure any greywater diversion is undertaken in accordance with the *Local Government (Approvals) Regulation (2005)* and the *Protection of the Environment Operations Act (1997)*.

6.3.6 Tanks and Other Vessels

6.3.6.1 Construction

All tanks (regardless of material) and other wastewater management vessels must be constructed to ensure they can meet the performance objectives of AS/NZS1546.1: 2008. They must be;

- effectively designed;
- structurally sound and capable of meeting load tests;

- watertight (as defined in the Standard);
- fitted with appropriate, watertight fittings and access openings for maintenance; and
- suitable for holding corrosive material.

Tanks and vessels used in domestic on-site sewage management systems (<2,000 L/day) must be accredited by NSW Health with the exception of site specific designs. In these cases, tanks and vessels will still need to meet the performance objectives of *AS/NZS1546.1:2008* (the Standard). This may require certification by the supplier / builder of the vessel. Refer to Clause 1.2.2 of the Standard.

Tanks and vessels used in non-domestic wastewater management systems do not require NSW Health accreditation. However, they too must meet the performance objectives of *AS/NZS1546.1:2008* as a minimum. All pre-cast vessels will need to be accompanied by certification from the supplier that the vessel meets these objectives. Vessels that are constructed in-situ will require certification from a structural engineer.

There may be some circumstances when a wastewater management vessel will be required to exceed the performance objectives of *AS/NZS1546.1:2008* (e.g. with respect to watertightness or load bearing strength).

6.3.6.2 Installation

- Tanks and vessels should generally be installed to good construction practice in accordance with the Standard. This includes excavation, bedding, compaction and backfilling procedures.
- All Sewage Management Facilities must be installed such that the top of the lid of the facility is located a minimum of 150mm above surrounding finished ground surface. This may be an access riser where a watertight seal is established between the tank lid and riser.
- Consideration must be given to hydrostatic uplift potential for tanks installed in ground subject to permanent or periodic high groundwater. Anchoring may be required, particularly where a pump well or holding tank is concerned (i.e. a tank that remains effectively empty for extended periods).
- Septic tanks do not require venting at the tank. House vents installed in accordance with *AS/NZS3500* will be sufficient.

6.3.7 Septic Tank and Pump Well Sizing

Septic tanks have traditionally been undersized in NSW, largely as a result of adoption of short desludging frequencies. Research conducted over the last 20 years has confirmed that larger septic tanks, being desludged less frequently result in significant improvements in overall system performance. Desludging tanks too frequently prevents the establishment of good anaerobic digestion of sludge and scum, which reduces effluent quality and increases sludge build-up. The following table presents Council's *Minimum Standards* for septic tank and pump well capacities. They are based on a minimum desludging frequency of five years. Council encourage the use of even larger septic tanks, based on 8-12 year desludging frequencies.

Table 6-4 Minimum Septic Tank Capacities for Residential Systems

Number Bedrooms	Septic Tank Capacity ^{1,2} (Litres)
3	3000
4	3500
5	4000
6	4500
^{1.} Assumes reticulated water supply and 1.6 persons per bedroom occupancy ^{2.} Volumes represent operational volumes (i.e. to outlet invert)	

Pump wells may be required to receive septic tank effluent for pumped or siphon dosing of a land application system or additional treatment component. Pump wells must meet the following minimum standards.

- A minimum of 24 hours of emergency storage shall be provided above the high level alarm. This storage can be reduced to 12 hours where a duty and standby pump are installed.
- Pump wells must be fitted with an audio/visual high level alarm float switch or sensor to notify the owner of an operational problem. High risk applications may require provision of remote monitoring (e.g. telemetry) that enables service contractors (and potentially Council) to be notified of high levels (as a minimum).
- Where pump operation is controlled by a timer, a low level pump-off and high level pump-on float switch or sensor shall be installed to override the timer. A high level alarm is still required.

6.3.8 Plumbing, Drainage and Electrical Work

All plumbing and drainage work associated with on-site sewage management systems must be completed in accordance with the National Construction Code (NCC) which incorporates the Plumbing Code of Australia (PCA 2011). The NSW Government has adopted the NCC and PCA in replacement of the NSW Plumbing and Drainage Code as of 2011. In effect, sanitary plumbing and drainage work must be undertaken in accordance with *AS/NZS3500.2* by a licenced plumber and drainlayer both prior to and following adoption of the PCA / NCC.

All electrical work must be conducted by a licenced electrician in accordance with relevant standards such as *AS/NZS 3000.2007*. Within on-site wastewater work, a restricted electrical licence may be sufficient for some jobs.

6.3.9 Flood Prone Land

All treatment systems shall be installed to protect electrical components and minimise the discharge of effluent directly into flood waters. Any unsealed electrical connections/components shall be located at a height at or above the habitable floor level (HFL) relevant to the property subject of the Notice of Determination. Where possible the top of the lid of the facility is to be located at or above the 1% Annual Exceedence Probability elevation (Council's Flood Prone Land level). In some cases this is not feasible due to construction of the building on piles. In these cases, the main lid to the facility shall be sealed with a durable, waterproof sealant. Access lids/openings that require periodic removal for inspection and maintenance shall be sealed with silicate sealant or similar.

All Sewage Management Facilities must be installed such that the top of the lid of the facility is located a minimum of 100mm above surrounding finished ground surface regardless of whether the property is subject to inundation by surface water (flooding) or not,

6.3.10 Standard Installation Conditions

Standard installation conditions apply to all treatment systems regardless of the system type. It is important that all the conditions within the Notice of Determination are complied with to ensure its continued safe and correct operation. A copy of the standard installation conditions can be obtained from Council. Additional system and/or site specific conditions may be included with each Notice of Determination at the discretion of the Council Officer.

6.3.11 Dual Occupancy Development

It is the preference of Council that multi residential developments whether attached or detached (I.e. dual occupancy) on single allotments be each serviced by **individual** sewage management systems of a type, size and design appropriate to the proposed development, hydraulic load, influent quality and effluent quality requirements. Council will consider the connection of multiple dwellings/buildings to a single system of sewage management where it can be demonstrated by the applicant that the total hydraulic load is significantly lower than the rated capacity of the system or where the proposed dual occupancy is a time limited consent. The connection of multiple treatment systems to a common land application area will be considered by Council where it can be demonstrated by the applicant that the area is capable of accepting the combined hydraulic and nutrient loads and the environmental and health related impacts are acceptable.

Where multiple buildings are connected to a single system, only one approval to operate will be issued. As a result, a single party must be willing to be nominated as the operator.

6.3.12 Effluent Pump-out

Section 1.5 of this DAF sets out the circumstances where effluent pump-out systems will be considered and potentially permitted. Where pump-out systems are permitted, the following Minimum Standards apply.

- The system should consist of a septic tank with gravity drainage to a collection well. A draw-off line and standpipe for tanker connection will be required. The following minimum capacities apply for effluent pump out systems, calculated based on NSW Health *Septic Tank and Collection Well Accreditation Guidelines*. Non-residential systems should be calculated in accordance with these guidelines.

Table 6-5 Minimum Septic Tank and Collection Tank Capacities for Pump-out Systems

Number Bedrooms	Septic Tank Capacity ¹ (Litres)	Collection Well Capacity ¹ (Litres)
3	3000	6000
4	3500	7500
5	4500	10000
6	6000	12500
¹ . Assumes reticulated water supply		

- **Alarm Systems** - All collection wells shall have high water level alarms installed into the collection well(s) and must incorporate both audible (buzzer) and visual (strobe) alarm components.
 - A muting facility for the audible alarm is to be designed into the alarm system. The muting facility shall reset to audible after 24 hours.
 - The alarm panel shall be located in a visible position within the dwelling/building or other location approved by Council. The location of alarm panels within electrical meter boxes or other confined space is not permitted.
 - The float switch shall be set at a level such that on activation two (2) days storage remains within the collection well.
 - On commercial or industrial sites the provision of an information sign may be required that provides contact names and telephone numbers should the alarm be observed to be activated.
 - For commercial/industrial systems high water level alarms utilising telemetry technology (back to base monitoring) may be conditional.
- **Standpipe, Draw-off Lines and Fittings** – Draw-off lines shall be constructed of Class 9 PVC pipe that conforms to the relevant Australian Standard. The diameter of the draw-off line shall be a minimum of 80mm for collection wells with a capacity of up to 10,000 litres. For collection well capacities greater than 10,000 litres the draw-off line shall be 100mm in diameter. The draw-off line must be buried below ground to protect the pipework from UV and physical damage.
 - Standpipes are to be constructed of a suitable material resistant to damage by ultra-violet rays and the weather in general. Suitable materials may include corrosion resistant metals or stabilized PVC. The standpipe is to be securely supported by a suitable fixing method.
 - The provision of a suitable connector for tanker connection is to be fitted to the end of the standpipe and must include an end-cap. A suitable fitting may include a screw on adapter or camlock.
 - A shut-off or stop valve shall be fitted where the height of the standpipe outlet is physically lower than the lid of the collection well.
 - The standpipe shall be located in a position that permits the safe parking of the effluent removal tanker. The standpipe shall not be located outside the property boundary.

6.4 Minimum Standards: Land Application Systems (General)

The DAF provides direction on the information and calculations required to demonstrate that an applicant has selected, designed and sized a land application system to a level of detail appropriate for the site. Council's *On-site Sewage Management Technical Manual* also provides guidance on minimum standards for selection, design and sizing of land application systems. Where an applicant is seeking approval for an individual on-site system on a Low or Medium Hazard lot, use of Council's Acceptable Solution tables effectively eliminates the need to undertake detailed design calculations. This section of the DAF sets out critical Minimum Standards that apply to all land application system types.

6.4.1 Effluent Quality Requirements for Land Application

6.4.1.1 Domestic Systems (< 2,000 L/day)

Council advocate a risk based approach to determining suitable effluent quality for specific land application methods. Table 6-6 is generally consistent with **NSW Health Advisory Note 4 (May 2006)**, with one critical difference. Council will consider the subsurface irrigation of secondary effluent without active disinfection where a health risk assessment demonstrates acceptable risks. This deviation seeks to establish consistency between effluent land application and reuse.

Table 6-6 Minimum Effluent Quality Requirements for Land Application and Reuse

Land Application System	Primary	Secondary (no disinfection)	Secondary (disinfection)	Advanced Secondary (disinfection)
Absorption and Evapo-transpiration Trenches and Beds	Yes	Yes	Yes	Yes
Mounds / Raised Systems	Yes	Yes	Yes	Yes
Subsurface Irrigation	No	With justification ¹	Yes	Yes
Surface Irrigation	No	No	Yes	Yes

Note 1: Subsurface irrigation of secondary treated effluent without active disinfection will be considered where a health risk assessment is completed in accordance with the Australian Guidelines for Water Recycling: Managing Health and Environmental Risk (Phase 1) that demonstrates risk management is commensurate with standards imposed on equivalent water recycling schemes.

6.4.1.2 Non-Domestic Systems

NSW Health Advisory Note 4 (May 2006) is not applicable to any system greater than 2,000 L/day in flow or of a non-domestic nature. Selection of both a treatment and effluent management or reuse option that is appropriate for a site will be a critical part of system selection processes for non-domestic systems. Refer to Section 3.1.2 and 3.2.2 for more detail. Importantly, Council will typically support land application by pressure compensating subsurface irrigation of secondary effluent with or without active disinfection where land capability and sensitivity of the receiving environment allow.

6.4.2 Matters for Consideration: Selection and Design of Land Application Systems

This DAF sets out Minimum Standards for the selection and design of wastewater systems that increases the level of detail based on potential risk. Designers will need to balance the following factors in selecting a suitable land application system and effluent quality.

- Site and soil constraints and the limitations they place on the assimilation of effluent.
- Climate, exposure and vegetation growth potential.
- Setback distances to sensitive receptors (Table 6-8).
- Opportunities to minimise energy usage demands (pumping requirements).
- *Prior and future land use*: determine any prior land use activities that may impact on design and operation of subsurface system. Consider future land use to ensure structures are not built over or other activities do not impact on the land application system.
- Owner preferences for the location of buildings and services.

Further guidance on system selection and design is provided in the *On-site Sewage Technical Manual* and *AS/NZS1547:2012*. In particular Appendix K of *AS/NZS1547:2012* provides guidance on land application measures that will assist with managing constraints. When a property subject of the application contains significant environmental or topographical constraints, suitable measures must be designed into the system (either treatment, land application or both) to mitigate the constraints environmental or health related impact. Mitigation options should be tested through design calculations and modelling (as per this DAF) to demonstrate that they overcome identified constraints.

Significant research from Australia and worldwide has been conducted into the factors that influence the performance of on-site sewage land application systems. A number of consistent recommendations have evolved out of this research relating to effective design of land application systems.

Intermittent dosing / resting allows time for aerobic breakdown of the biomat or biofilms that form on soil surfaces. It also encourages breakdown of nutrients and other pollutants. During wet, cool conditions it minimises opportunities for saturated soil conditions.

Division of land application areas into sub-zones goes hand in hand with intermittent dosing and provides additional redundancy into a design in the event of minor component failure.

Provision of more than 600mm of unsaturated soil between the point of application and limiting layers (e.g. bedrock or weathered rock) or groundwater has been shown in a range of soils to deliver a high level of effluent polishing and disinfection. In some cases this may require the use of raised irrigation beds.

Even effluent distribution using pressure dosing (e.g. pressure compensating drip irrigation or LPED) maximises the active surface area of a land application system and minimises the potential for localised failure due to variable levels.

These four principles can be used to overcome the majority of site constraints and when coupled with rigorous sizing procedures (e.g. water balance) and careful construction, can offer a very high level of performance.

Regardless of system type, all land application systems must be installed parallel with the contour of the land.

It should be noted that while this DAF does not preclude the use of gravity dosed trenches and beds, there are only limited sites within the Greater Taree City LGA where they will be suitable. Effective gravity dosing of trenches and beds can be challenging and requires careful excavation and survey procedures during construction. Historically, the accepted design life of gravity dosed trenches and beds (5-10 years) was actually a product of undersizing and poor construction practice (in addition to other factors).

With the advent of pressure compensating subsurface irrigation, it is often cheaper and more effective to install a secondary treatment system with drip irrigation rather than construct a robust evapo-transpiration bed. Intermittently pressure dosed trenches and beds receiving secondary treated effluent are more likely to be considered, particularly for sites where space is constricted.

6.4.3 Sizing of Land Application Areas

Following completion of the *Sustainable On-site Sewage Management Systems* project it was concluded that a simplified hydraulic sizing approach would be adopted for on-site systems on Low, Medium and High Hazard allotments. This relates to limitations on the useability and applicability of monthly water balance calculations in moderate to high rainfall areas. It also relates to the limited purpose of monthly water balance calculations for design sizing of subsurface irrigation systems or mounds (the two dominant modern land application options). A full rationale for design sizing is provided in Section 9.2 of the *GTCC On-site Sewage Technical Manual*.

Hydraulic sizing of land application areas shall be undertaken using Equation 1 below.

$$LAA = \frac{Q}{(DLR - CAF)} \quad \text{Equation 1}$$

Where;

LAA = Land Application Area (basal area in m²)

Q = Design Wastewater Generation Rate (L/day)

DLR = Design Loading Rate (mm/day)

CAF = Climate Adjustment Factor (mm/day)

Detailed land application system modelling was used to support design experience in the sizing of land applications within the LGA. The Climate Adjustment Factor (CAF) enables design loading rates to be adjusted to reflect the degree to which climate influences hydraulic performance. They have been determined based on analysis of the frequency and magnitude of hydraulic failure for a range of on-site system types in different climate regions (consistent with the climate zones adopted for the

Acceptable Solutions). In very wet climates the CAF reduces the daily DLR to reflect the limitation placed of hydraulic capacity by consistently high soil moisture. In dry climates the CAF may increase the DLR based on a higher evapo-transpiration output of applied effluent. The result is comparable to a monthly water balance with respect to rigour of design. However, it is a simpler approach that requires limited time to calculate.

Climate adjustment factors can be found in the *Technical Manual* for the range of system types and climate zones. Design loading rates should be obtained from *ASNZS1547:2012*.

A full explanation and methodology for completing annual nutrient balance calculations is provided in the *Technical Manual*.

6.4.4 Wet Weather Storage

In most cases the use of wet weather storage facilities will not be approved for domestic or residential applications. It is preferable that wet weather storage be designed into the physical size of the land application area or that wet weather be managed through conservative loading rates rather than the installation of storage tanks. The incorporation of wet weather storage facilities (tanks) as a method of handling excess effluent during periods of rainfall will only be approved in specific circumstances and subject to careful design of monitoring and control systems. Wet weather storage will be considered for non-domestic systems or reuse facilities.

6.4.5 Retaining Walls

Due to the potential for soils within land application areas to become unstable, retaining walls greater than 600mm in height shall be designed by an appropriately qualified and experienced engineer. Construction of the retaining walls shall be performed by appropriately experienced persons in accordance with the engineered plans with the final works to be engineer certified with a copy of the certification provided to Council.

6.4.6 Vegetation

Large trees should not be planted on land application areas. Roots interfere with sub-surface land application systems and shading can reduce evaporation. Trees can however increase the transpiration process. Trees should be planted at a distance from the land application area equivalent to the tree height at maturity.

Vegetation that grows to approximately one (1) metre or less is typically appropriate for land application areas. However grass is the most effective vegetation cover for the uptake of effluent (water and nutrients).

6.4.7 Soil Improvement Works

Where recommended as an outcome of a site and soil assessment, it may be conditioned in the consent that soil improvement works are to be undertaken. Soil improvement works will be required where the surface or soil within the land application area is considered unsuitable for plant growth or effluent assimilation in its present state. It may also be recommended as a preventative measure (e.g. application of gypsum to maintain a lower Exchangeable Sodium Percentage). Barriers to the efficient, appropriate and long term disposal of effluent can include:

- Soil pH (plant growth and pollutant assimilation):
- Soil salinity (measured as electrical conductivity):
- Sodicity (measured as exchangeable sodium percentage):
- Dispersiveness (Emerson aggregate test)
- Cation exchange capacity (CEC): and/or
- Heavily compacted soils.

Site and soil reports prepared by Wastewater consultants will generally contain recommended soil improvement works if soil problems are identified. Council staff that identify soil problems as part of the site inspection and assessment process may also require remediation works be undertaken. It is important that the soil remediation works are carefully designed and correctly performed. Soil improvement works may include one or a combination of the following:

- The addition of gypsum (quantities must be calculated by a suitably qualified person):
- The addition of lime (quantities must be calculated by a suitably qualified person):
- The addition of organic matter (improvement of poor natural soils with composted materials):
- The importation of fill material (soil types must be suitable for land application and this activity may be subject to a development application under the *Environmental Planning and Assessment Act*):
- The importation of amended soil (higher phosphorus sorption capacity):
- The removal of rock ("floaters" and loose boulders):
- The ploughing of the soil within the land application area (typically to a depth of 200mm): and
- The laying of turf, application of seed or planting of suitable vegetation species.

The importation of fill will require specification of a suitable soil type and careful design to prevent failure at the fill / natural soil interface. Refer to the *Standard Designs for Tilligerry Creek* report for more details.

6.4.8 Diversion Drains

A diversion drain will typically be required on all land application area types where there is potential for stormwater to enter the area. Diversion drains, also known as spoon drains, dish drains or "V" drains are essential in keeping the land application area as dry as possible. If there is potential for stormwater to enter the land application area then a diversion drain will be required. The diversion drain shall be constructed in such a way that it protects the entire land application area without directing the stormwater onto neighbouring properties. On highly sloping properties, cut-off drains may be required (refer diagram in AS1547 or similar).

6.4.9 Earth Bunds

Where a surface irrigation land application area is located in close proximity [and upslope] from a property boundary or sensitive receiving environment an earth bund must be constructed. Design and construction of the earth bund shall consider the following principles:

- Be located downslope of the irrigation area to prevent contaminated runoff leaving the land application area:
- Be sufficiently distanced from the lowest spray heads such that effluent is fully contained:
- Be constructed from heavy earth (Clay Loam) not susceptible to erosion or leaching:
- Be compacted to a minimum height of 300mm:
- Be stabilised with turf or other suitable material to reduce the susceptibility for erosion:
- Be designed to restrict the transportation of effluent outside the bounds of the land application area: and
- Be constructed to permit ease of maintenance with consideration given to extending the length of the batters.

As an alternative to earth bunds, raised garden beds (300mm minimum height) may be constructed. The installation of shrubs and trees at natural ground level will not be considered an alternative to an earth bund.

6.5 Minimum Standards: Subsurface Irrigation

Subsurface irrigation or drip technology involves the installation of a matrix of small diameter pressure compensating dripline within the land application area that emit effluent through specially designed emitters at very low flow rates (typically less than 3 L/hr from each emitter). It is important that the pipework is buried within the root zone of the vegetation, whether grass or shrubs, typically 150 – 200mm below ground surface. Lateral (horizontal) spacings for the pipework is typically between 600mm and 1000mm (maximum spacing permitted) depending on soil type. It is critical that the lateral (horizontal) spacings be matched to the soil type to prevent “zebra” striping, a sign of inefficient effluent distribution.

Only commercially available pressure compensating subsurface irrigation pipework specifically designed for the dispersal of treated wastewater is to be installed. Pressure compensation is critical to effective land application as it ensures even distribution of effluent over variable topography. Effluent dripline either comes with in-built root inhibitor and bacteriocide or requires dosing through an erosional filter system. Pressure compensating subsurface drip irrigation requires secondary quality effluent as a minimum to prevent blockage (without automated self backflushing filtration). Advanced secondary effluent is preferred for a long operational life. The disposal of septic tank effluent using this disposal method is not permitted.

It is important that an appropriately qualified and experienced person or company be consulted for the design work such that the design and size of the disposal area can be properly matched to the hydraulic loading, nutrient loading, soil type, climatic and topographical conditions of the property. An under sized or poorly designed system will lead to failure with potential environmental and health related impacts. Alternatively, an oversized or over designed system could lead to the poor distribution of effluent, un-necessary cost burden and the un-necessary sterilization of land.

Drip technology is a well established industry and as such companies producing subsurface products have written excellent design and installation guidelines. Manufacturer's specifications, standard drawings and design guidelines should be used to support applications. Care must still be taken to

ensure the disposal area design considers both the manufacturers recommended design guidelines as well as the specific site, soil and climatic conditions of the property in question.

A critical element of the design process is hydraulic design including selection of appropriate dripline, dosing and flush manifold pipe, lateral and emitter spacings and pump performance. Dripline typically needs an operating pressure at the emitter of 10-40 m to maintain pressure compensation. As such, higher head, low flow pumps are required to service drip irrigation systems that differ from pumps traditionally used in on-site sewage management. For smaller systems, standard sizing tables and charts from dripline manufacturers will typically suffice for hydraulic design. Larger systems will require a full hydraulic analysis to be undertaken where Total Dynamic Head (TDH) for the proposed system is determined. From this point a suitable pump, capable of delivering the end of line pressure (10-40 m) can be selected. Checks should also be completed to ensure the pump is capable of delivering flushing flows during open valve conditions.

An in-line disc filter should be installed for final effluent filtration prior irrigation. Vacuum breakers and flush valves will be required for each sub-zone. Laterals should still be installed parallel with land contours despite the pressure compensating emitters. Valve access boxes should be installed at all corners of the field.

6.6 Minimum Standards: Surface Irrigation

Surface irrigation involves the use of spray heads or surface drippers to apply secondary treated and disinfected effluent directly to the surface of garden beds or lawn. Surface irrigation was historically the dominant approved method of land application for Aerated Wastewater Treatment Systems (AWTS). Whilst being lower cost to install, surface irrigation has typically been done poorly with respect to on-site sewage management and is prone to operational, health and environmental failure. Surface irrigation on single residential lots is not considered good practice worldwide and Council supports this assertion based on many years of experience auditing existing systems. There are however, specific circumstances where Council will consider or allow surface irrigation, subject to the following Minimum Standards.

6.6.1 New Development

New developments will generally not be permitted to install surface irrigation land application areas. Only sub-surface or sub-soil methods of disposal will be permitted except where circumstances exist that requires the use of an alternative approach to either a subsurface or sub soil technique. The approval of surface irrigation in this instance remains at the discretion of Council. Surface irrigation may be considered more seriously for larger commercial developments or for genuine reuse projects.

6.6.2 Existing Surface Irrigation Systems

The continued use of surface irrigation on properties operating systems approved prior to the adoption of this document will be permitted where it can be shown through inspections by Council staff that the continued operation poses minimal environmental and/or health related impacts. Where environmental and/or health related impacts are determined through Council inspections the continued approval of surface irrigation may be withdrawn. In this instance an alternative method of land application will be required OR if insufficient useable land exists the conversion to an effluent pump-out system may be enforced.

Many surface spray irrigation systems installed prior to 1998 are unable to comply with current guidelines including prescribed buffer distances due to the small size of the property. In these situations it is necessary for the property owner to **maximize the distribution of treated effluent** around the property in such a manner that has minimal environmental and health related impacts. Council may permit the installation of a semi-fixed surface irrigation design on a property operating an approved disinfecting secondary treatment system with surface irrigation subject to the following criteria:

- Garden hose (green or any colour other than lilac) and black irrigation pipe is not permitted to be used above ground.
- Consider the use of pressure compensating drippers in garden beds (professional hydraulic design is essential to prevent damage to the irrigation pump).
- Above ground hose must be lilac in colour, 19 – 25mm in diameter, flexible and have an appropriate warning indelibly printed along the length of the hose.
- The length of the above ground hose shall be limited such that any attached spray heads are unable to be located where the effluent can potentially impact on the environment or public health.
- Multiple spray heads of an approved type must be operational during any pump cycle.
- Consider the installation of multiple in-ground “turf” valves (with lilac coloured lids) located at strategic positions around the property to which short lengths of lilac hose and sprayers can be connected.

6.6.3 Spray Heads (Standard Type)

Only spray heads complying with AS1547:2012 will be approved for use. Spray heads must be capable of controlling the droplet size, throw and plume height such that the potential for production of aerosols (and subsequent wind drift) is reduced. Typical spray heads approved for use includes rotary types (rotor rain mini sprinklers or equivalent), wobblers and low pressure pop-ups.

6.7 Minimum Standard: Sub-soil Trenches and Beds

This method ensures that effluent is disposed a minimum 300mm below finished ground level and includes evapo-transpiration areas, absorption trenches/beds and Low Pressure Effluent Drains (LPED). As previously discussed the use of this method with primary treated effluent is restricted under the DAF and Acceptable Solutions. An example where a primary effluent system may be appropriate is a rural location with a low population density and no other environmental constraints. Secondary dosed trenches and beds will be considered more readily and may offer opportunities on sites with limited available area.

The design and construction of evapo-transpiration areas and absorption trenches/beds should generally be conducted in accordance with Part 5, 6 and Appendix L of *AS/NZS1547:2012*. Guidance on the design and construction of LPED (pressure dosed) beds can be obtained from Section 5 and Appendix M of *AS/NZS1547:2012*. It is Council's preference that absorption trenches/beds be designed to incorporate a pressure dosing system. The use of sub soil trench and bed designs incorporating gravity distribution methods are restricted under the Acceptable Solution tables. Regardless of dosing method, the base of trenches and beds must be level and as such regular spot

levels must be taken during construction. Extreme care is essential when installing any gravity flow splitter devices as incorrect levels can impede long-term operation. Gravity splitter devices are also prone to subsidence / movement after construction.

Trenches and beds should be divided into a sufficient number of zones that no individual trench or bed exceeds 30 metres in length. A reserve area is required for trenches and beds receiving primary effluent. Recent research from the USA has shown that the application of secondary quality effluent to trenches and beds does not result in significant biofilm build-up and as such, a reserve area is not necessary.

6.8 Minimum Standards: Mounds / Raised Beds

There are two common environments in Greater Taree City where the use of raised systems can overcome constraints and ensure effective assimilation of effluent.

- Estuarine and floodplain landscapes where episodic or permanent groundwater is in close proximity (<1m) to the surface and/or the site is under the 5% AEP flood elevation.
- Colluvial and erosional landscapes where a limiting layer (hardpan, bedrock or weathered material) is in close proximity to the surface.

Raised systems (of any kind) require a higher level of engineering and construction detail that invariably comes at a higher cost. Poor or inadequate design and construction practices can lead to failure, commonly in the following manner.

- Breakout of effluent from the toe of the raised bed due to;
 - poor preparation of the existing soil surface;
 - use of poor quality media;
 - lack of care in laying fill material / setting levels; and/or
 - underestimating the linear loading rate or basal loading rate.
- Blockage / failure of the pressure dosing manifold (particularly primary dosed systems) due to;
 - poor hydraulic design and subsequent adoption of an inadequate pump, incorrect orifice size / spacing and failure to achieve scouring velocities;
 - insufficient or infrequent flushing / cleaning of sludge from the laterals;
 - treatment failure at the tanks due to lack of maintenance / shock hydraulic and chemical loads etc; and/or
 - poor construction practice (e.g. inconsistent orifice diameters and levels, failure to clear construction debris from manifolds etc).

Detailed advice on the design and construction of raised systems can be obtained from *ASNZS1547:2012* and Tyler and Converse (2000 – see below for download link).

6.8.1 Raised Subsurface Irrigation Beds

Raised subsurface irrigation beds offer a highly effective, best practice land application option for constrained sites when coupled with a reliable secondary or advanced secondary treatment system.

While these raised beds are less sensitive to poor design and construction practice, they still require careful consideration of the following issues.

- While greater flexibility exists in media (fill) selection (due to lower areal loading rates and high effluent quality), raised subsurface irrigation beds still require careful preparation of the existing ground underneath the bed and laying of fill to minimise the potential for breakout.
- Research from the USA into raised systems confirms local experience that assignment of a Linear Loading Rate based on soil structure, texture, depth and slope is still critical.
- Effective water and nutrient uptake requires a good vegetation cover with the preference being turf. Raised garden beds planted with grasses, shrubs and trees will only be considered on a site by site basis subject to justification from the designer. Shrubs and trees typically display a significantly greater reduction in evapo-transpiration during non-growth periods.
- Raised irrigation beds will not typically be accepted on sites with slopes >10% with clay loam to clay sub-soils without a comprehensive engineering design for the soil / fill material, hydraulic design of the irrigation system and any geotechnical / structural design issues associated with retaining walls.

6.8.2 Wisconsin Mounds

Wisconsin Mounds offer an opportunity to achieve high levels of effluent treatment prior to high groundwater or rock without the need for a secondary treatment device. They can however be comparable in cost and selection of an appropriate system will depend on a number of site specific factors and owner preferences. Operational evidence from thousands of mound systems in the USA has consistently proven that while they require more cost and technical/construction effort at the front end, total life cycle costs and life spans for mounds are a favourable. When designed and constructed properly, mounds are highly effective, relatively low maintenance options. However, sites without a limiting layer close to the ground surface may not warrant installation of a mound system. Detailed guidance on the design and construction of mounds should be obtained from Converse J.C. and Tyler, E.J. (2000). Wisconsin Mound Soil Absorption System: Siting, Design and Construction Manual. University of Wisconsin-Madison – found at: http://www.wisc.edu/sswmp/pub_15_24.pdf.

6.8.3 Amended Soil Mounds

Amended soil mounds can be a useful option where a site is in close proximity to a sensitive receiving environment with respect to phosphorus. However, these systems must demonstrate their capability for sustainable long-term performance in order to be approved. Inspection of existing amended soil mounds in the region has identified a higher than typical hydraulic failure rate caused by a range of design and construction factors. **Of critical importance is the recognition that amended soil mounds are not a closed system. A comparable volume of effluent to other land application options discharges into the environment from these systems.**

A comprehensive water balance must be completed for all amended soil mounds that acknowledges the following points.

- There is no empirical evidence to suggest that mound systems achieve higher evapo-transpiration rates than other systems. Typical crop factors should be used.

- Where a sand bed is to be included under the cells for absorption of effluent, no evapo-transpiration can be allowed for and the minimum Design Loading Rates from *ASNZS1547:2012* must be adopted. The limited (and inconsistent) performance data available for these systems would confirm first principles that sufficient BOD and TSS remains in effluent to allow development of anaerobic biofilms. The installation of an impermeable seal above the bed also acts to prevent oxygen transfer through the soil, a process identified in research as critical to preventing hydraulic failure of land application systems.
- Designers should recognise that hydraulically, amended soil mounds operate as slightly impeded, gravity dosed evapo-transpiration beds and as such should be subject to the same limitation on their use. Gravity dosed beds of any kind are not permitted in many locations in Greater Taree City due to the challenges associated with even distribution of effluent.

Given that final effluent discharging into the environment is somewhere between primary and secondary effluent (with the exception of phosphorus), the nutrient and pathogen assessments required under this DAF also apply to these systems. To this end performance data for amended soil mounds of the **same design configuration** servicing a similar facility must be provided to support any stated effluent quality performance.

6.9 Buffer Distances

When designing a land application area it is critical to ensure that sufficient useable land is available on the allotment following consideration of buffer zones. Buffer zones are especially important when proposing the installation of an on-site system in environmentally sensitive locations. Research, monitoring and modelling of on-site systems consistently identifies buffer distances as an effective and cost effective risk management strategy. However it is also evident that buffer distances necessary to prevent downslope and off-site impacts vary considerably from one site to another. They will also vary depending on the sensitivity of the receiving environment. Best practice determination of buffer distances should adopt a risk based approach as advocated in Appendix R of *AS/NZS 1547:2012*. Where on-site systems are proposed for highly constrained sites or sites in close proximity to sensitive receiving environments, quantitative environmental modelling may be warranted to determine site specific buffer distances.

The DAF adopts a three tiered approach to the assignment of buffer distances for a proposed on-site system or unsewered development.

Tier 1 – Adoption of Standard Buffer Distances from Table 6-8 (NSW Guidelines)

Standard buffer distances will provide effective risk management for off-site impacts in the majority of circumstances. In order to adopt the Acceptable Solution pathway for system approval, proposed systems should be able to meet the Standard buffer distances.



Tier 2 – Application of Appendix R from AS/NZS 1547:2012 (Qualitative Risk Approach)

The risk based approach documented in Appendix R of *AS/NZS 1547:2012* can be applied in cases where a) Standard buffers are not achievable; or b) assessors and designers want to determine if reduced buffers are justifiable. This approach is acceptable where site specific information on land capability is used in conjunction with peer reviewed published technical information to support the risk classification. Importantly, there will be some cases where this approach with result in an increase in buffer distances.

Failure to provide supporting technical evidence to support reduced buffers may result in refusal.



Tier 3 – Site Specific Quantitative Determination of Appropriate Buffer Distances

Increased data collection and environmental modelling will be required in cases where a) Tier 1 and Tier 2 approach has not been adopted or met; b) for sites in close proximity to highly sensitive environments such as aquaculture, protected ecosystems, drinking water supplies and recreational areas and waterways. This approach will require daily mass balance modelling and evaluation of pollutant attenuation consistent with the Detailed Cumulative Impact Assessment (See Table 2-15). In highly sensitive environments, site specific groundwater modelling may be necessary.

Table 6-7 Application of the Tiered Approach to Determination of Buffer Distances

Approach	
Tier 1 – Standard Buffer Distances	Low, Medium and High Hazard allotments (domestic systems)
	Must be met to adopt the Acceptable Solution approach
Tier 2 – Appendix R of AS/NZS 1547:2012	Low, Medium and High Hazard allotments where Tier 1 buffers cannot be demonstrated.
	Low, Medium and High Hazard allotments (non-domestic systems < 10 kL/day).
Tier 3 – Site Specific Determination	All non-domestic systems > 10kL/day.
	All Very High Hazard allotments (domestic and non-domestic).
	All sites within 100 metres of a Priority Aquaculture Zone or a water body or bore used for Potable Water Supply.
	Any application where the minimum buffer distance in Table R1 of AS/NZS 1547:2012 cannot be demonstrated.

Please note buffer distances with respect to unsewered subdivision and other increases in building entitlement are addressed separately in Section 2.

Table 6-8 summarises Councils Standard buffer distances which are consistent with the NSW *Environment and Health Protection Guidelines On-site Sewage Management for Single Households*. For the purpose of this DAF, these buffer distances should be met where no site specific determination of risk has been made. They are also used to determine what constitutes an Acceptable Solution in the case of Low and Medium Hazard proposals.

Where Standard buffer distances are not achievable it will be necessary to adopt the Tier 2 approach using *AS/NZS 1547:2012*. Council will accept proposals that document specific design (risk treatment) measures to reduce the risk associated with off-site impacts. *AS/NZS 1547:2012* also provides guidance on specific measures to address such limitations. Examples include improving the quality of effluent treatment by careful selection of the treatment system.

In more sensitive scenarios, the Tier 3 approach requires site specific buffer distances to be determined that take in to consideration the proposed treatment and land application system, sensitivity of the receiving environment, the type of groundwater environment, hydraulic conductivity and gradient. In most cases the *Greater Taree On-site Sewage Technical Manual* contains a set of reference tables or matrices that can be used to determine appropriate minimum buffer distances. There will be a small number of highly constrained sites that will require comprehensive on-site system and environmental modelling that is beyond the scope of this DAF.

Table 6-8 Minimum Buffer Distances for On-site System Land Application Systems

System / Land Application Type	Limiting Factor	Minimum Buffer Distance (m)
All Land Application Systems	Permanent surface waters such as: Lakes, rivers, creeks and streams	➤ 100m
	Domestic groundwater wells and bores	➤ 250m
	Other waters such as: Farm dams, intermittent waterways and drainage channels	➤ 40m
	Retaining wall, embankments, escarpments and cuttings.	➤ 15
Surface Spray Irrigation (Standard Spray Heads)	Driveways and property boundaries	➤ 6m if area up gradient ➤ 3m if area down gradient
	Dwellings and buildings	➤ 15m
	<i>Paths and walkways</i>	➤ 3m
	Swimming pools	➤ 6m
	Retaining wall, embankments, escarpments and cuttings.	➤ 12m if area up gradient ➤ 3m if down gradient
Surface Drip and Trickle Irrigation	Dwellings and buildings, swimming pools, property boundaries and driveways. Retaining wall, embankments, escarpments and cuttings.	➤ 6m if area up gradient ➤ 3m if area down gradient
Subsurface Irrigation	Dwellings and buildings, swimming pools, property boundaries and driveways Retaining wall, embankments, escarpments and cuttings.	➤ 6m if area up gradient ¹ ➤ 3m if area down gradient ¹
	<i>Depth to Hardpan or Bedrock</i>	➤ 0.6m below level of pipework ²
Absorption System	<i>Property boundary</i> <i>Retaining wall, embankments, escarpments and cuttings.</i>	➤ 12m if area up gradient ➤ 6m if area down gradient
	<i>Dwellings and buildings, swimming pools and driveways</i>	➤ 6m if area up gradient ➤ 3m if area down gradient
	<i>Depth to Hardpan or Bedrock</i>	➤ 0.6m below base of trench/bed

APPENDIX A: ACCEPTABLE SOLUTION SIZING TABLES

Climate Zone	Bedroom Size	Water Supply	Table	Page
Central (Taree)	One	Reticulated	A-1	A-2
		Tank	A-6	A-4
	Two	Reticulated	A-2	A-2
		Tank	A-7	A-5
	Three	Reticulated	A-3	A-3
		Tank	A-8	A-5
	Four	Reticulated	A-4	A-3
		Tank	A-9	A-6
	Five	Reticulated	A-5	A-4
		Tank	A-10	A-6
East (Harrington)	One	Reticulated	A-11	A-7
		Tank	A-16	A-9
	Two	Reticulated	A-12	A-7
		Tank	A-17	A-10
	Three	Reticulated	A-13	A-8
		Tank	A-18	A-10
	Four	Reticulated	A-14	A-8
		Tank	A-19	A-11
	Five	Reticulated	A-15	A-9
		Tank	A-20	A-11
West (Comboyne)	One	Reticulated	A-21	A-12
		Tank	A-26	A-14
	Two	Reticulated	A-22	A-14
		Tank	A-27	A-15
	Three	Reticulated	A-23	A-13
		Tank	A-28	A-15
	Four	Reticulated	A-24	A-13
		Tank	A-29	A-16
	Five	Reticulated	A-25	A-14
		Tank	A-30	A-16

Reticulated Water Supply

One Bedroom Dwellings

Table 6-9 Acceptable Solutions Taree Reticulated

Soil Class						On-site Sewage Management System Types					
		PT/Trench ¹		PT/Bed ²		ST/Trench ¹		ST/Bed ²		SSI ³	
Sands		20 ⁴				20 ⁴				100	
Sandy Loams		30 ⁴									
Loams		40				30					
Clay loams		50				40					
Light clays		70 ⁴				50				150	
Medium/heavy clays				70 ⁴							
All values are basal area of LAA in m ²											

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Two Bedroom Dwellings

Table A-2 Acceptable Solutions Taree Reticulated

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		30 ⁴		150
Sandy Loams	50 ⁴				
Loams	70 ⁴		50		200
Clay loams	100 ⁴		70 ⁴		
Light clays	140 ⁴		90 ⁴		250
Medium/heavy clays	140 ⁴				300
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-3 Acceptable Solutions Taree Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		200
Sandy Loams	60 ⁴		40 ⁴		
Loams	90 ⁴		60		250
Clay loams	130 ⁴		90 ⁴		
Light clays	Note 5		110 ⁴		300
Medium/heavy clays	Note 5				400
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

c) average slope of <10% across LAA; and

a) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-4 Acceptable Solutions Taree Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	60 ⁴		40 ⁴		250
Sandy Loams	80 ⁴		50 ⁴		
Loams	110 ⁴		80 ⁴		300
Clay loams	Note 5		110 ⁴		
Light clays	Note 5		140 ⁴		350
Medium/heavy clays	Note 5				450
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Five Bedroom Dwellings***Table A-5 Acceptable Solutions Taree Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	70 ⁴		40 ⁴		250
Sandy Loams	90 ⁴		50 ⁴		
Loams	Note 5		90 ⁴		300
Clay loams			130 ⁴		350
Light clays	Note 5				400
Medium/heavy clays					550
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Tank Water Supply*One Bedroom Dwellings***Table A-6 Acceptable Solutions Taree Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	20 ⁴		10 ⁴		100
Sandy Loams			20 ⁴		
Loams	30		20		
Clay loams	40		30		
Light clays	60		40		
Medium/heavy clays	60				150
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Two Bedroom Dwellings***Table A-7 Acceptable Solutions Taree Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	30 ⁴		20 ⁴		150
Sandy Loams	40 ⁴		30 ⁴		
Loams	60		40		
Clay loams	80 ⁴		60		
Light clays	110 ⁴		70 ⁴		200
Medium/heavy clays	110 ⁴				250
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-8 Acceptable Solutions Taree Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		20 ⁴		150
Sandy Loams	50 ⁴		30 ⁴		
Loams	70 ⁴		50		200
Clay loams	100 ⁴		70 ⁴		
Light clays	140 ⁴		90 ⁴		250
Medium/heavy clays	140 ⁴				300
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-9 Acceptable Solutions Taree Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		200
Sandy Loams	60 ⁴		40 ⁴		
Loams	90 ⁴		60		
Clay loams	120 ⁴		90 ⁴		250
Light clays	Note 5		110 ⁴		300
Medium/heavy clays	Note 5				350
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Five Bedroom Dwellings***Table A-10 Acceptable Solutions Taree Tank**

Soil Class						On-site Sewage Management System Types					
		PT/Trench ¹		PT/Bed ²		ST/Trench ¹		ST/Bed ²		SSI ³	
Sands		50 ⁴				30 ⁴				200	
Sandy Loams		70 ⁴				40 ⁴					
Loams		100 ⁴				70 ⁴				250	
Clay loams		140 ⁴				100 ⁴				300	
Light clays		Note 5				120 ⁴				350	
Medium/heavy clays		Note 5								450	
All values are basal area of LAA in m ²											

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Harrington Climate Zone (see Figure 5-2)**Reticulated Water Supply***One Bedroom Dwellings***Table A-11 Acceptable Solutions Harrington Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	20 ⁴		20 ⁴		100
Sandy Loams	30 ⁴				
Loams	40		30		
Clay loams	60		40		150
Light clays	80 ⁴		50		
Medium/heavy clays	80 ⁴				200
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Two Bedroom Dwellings***Table A-12 Acceptable Solutions Harrington Reticulated**

Soil Class		On-site Sewage Management System Types			
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		30 ⁴		150
Sandy Loams	50 ⁴				
Loams	80 ⁴		50		200
Clay loams	110 ⁴		80 ⁴		250
Light clays	Note 5		100 ⁴		300
Medium/heavy clays	Note 5				400
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-13 Acceptable Solutions Harrington Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		200
Sandy Loams	70 ⁴		40 ⁴		
Loams	100 ⁴		70 ⁴		250
Clay loams	140 ⁴		100 ⁴		300
Light clays	Note 5		120 ⁴		350
Medium/heavy clays	Note 5				450
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-14 Acceptable Solutions Harrington Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	60 ⁴		40 ⁴		250
Sandy Loams	80 ⁴		50 ⁴		
Loams	110 ⁴		80 ⁴		300
Clay loams	Note 5		110 ⁴		350
Light clays	Note 5		140 ⁴		400
Medium/heavy clays	Note 5				550
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Five Bedroom Dwellings

Table A-15 Acceptable Solutions Harrington Reticulated

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	70 ⁴		40 ⁴		300
Sandy Loams	90 ⁴		60 ⁴		
Loams	130 ⁴		90 ⁴		350
Clay loams	Note 5		130 ⁴		400
Light clays	Note 5		Note 5		500
Medium/heavy clays	Note 5				650
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Tank Water Supply

One Bedroom Dwellings

Table A-16 Acceptable Solutions Harrington Tank

Soil Class						On-site Sewage Management System Types					
		PT/Trench ¹		PT/Bed ²		ST/Trench ¹		ST/Bed ²		SSI ³	
Sands		20 ⁴				10 ⁴				100	
Sandy Loams						20 ⁴					
Loams		30				20					
Clay loams		50				30					
Light clays		60				40				150	
Medium/heavy clays		60									
All values are basal area of LAA in m ²											

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Two Bedroom Dwellings***Table A-17 Acceptable Solutions Harrington Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	30 ⁴		20 ⁴		150
Sandy Loams	40 ⁴		30 ⁴		
Loams	60		40		
Clay loams	90 ⁴		60		200
Light clays	120 ⁴		80 ⁴		250
Medium/heavy clays	120 ⁴				300
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

c) average slope of <5% across the LAA; and

a) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-18 Acceptable Solutions Harrington Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		30 ⁴		150
Sandy Loams	50 ⁴				
Loams	80 ⁴		50		200
Clay loams	110 ⁴		80 ⁴		250
Light clays	Note 5		90 ⁴		300
Medium/heavy clays	Note 5		Note 5		350
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-19 Acceptable Solutions Harrington Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		200
Sandy Loams	60 ⁴		40 ⁴		
Loams	90 ⁴		60		250
Clay loams	130 ⁴		90 ⁴		
Light clays	Note 5		110 ⁴		350
Medium/heavy clays	Note 5		Note 5		450
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Five Bedroom Dwellings***Table A-20 Acceptable Solutions Harrington Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		200
Sandy Loams	70 ⁴		40 ⁴		
Loams	100 ⁴		70 ⁴		300
Clay loams	Note 5		100 ⁴		
Light clays	Note 5		130 ⁴		400
Medium/heavy clays	Note 5		Note 5		500
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Comboyne Climate Zone (see Figure 5-2)**Reticulated Water Supply***One Bedroom Dwellings***Table A-21 Acceptable Solutions Comboyne Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	20 ⁴		20 ⁴		150
Sandy Loams	30 ⁴				
Loams	50		30		
Clay loams	70 ⁴		50		200
Light clays	110 ⁴		60		300
Medium/heavy clays	110 ⁴				600
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Two Bedroom Dwellings***Table A-22 Acceptable Solutions Harrington Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		30 ⁴		250
Sandy Loams	60 ⁴		40 ⁴		
Loams	90 ⁴		60		300
Clay loams	140 ⁴		90 ⁴		350
Light clays	Note 5		120 ⁴		550
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-23 Acceptable Solutions Comboyne Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		300
Sandy Loams	70 ⁴		40 ⁴		
Loams	110 ⁴		70 ⁴		400
Clay loams	Note 5		110 ⁴		450
Light clays	Note 5		140 ⁴		700
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

- a) average slope of <10% across LAA; and
- b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

- a) average slope of <5% across the LAA; and
- b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-24 Acceptable Solutions Comboyne Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	60 ⁴		40 ⁴		350
Sandy Loams	80 ⁴		50 ⁴		
Loams	130 ⁴		80 ⁴		450
Clay loams	Note 5		130 ⁴		550
Light clays	Note 5		Note 5		800
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

- a) average slope of <10% across LAA; and
- b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

- a) average slope of <5% across the LAA; and
- b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Five Bedroom Dwellings***Table A-25 Acceptable Solutions Comboyne Reticulated**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	70 ⁴		40 ⁴		400
Sandy Loams	100 ⁴		60 ⁴		
Loams	Note 5		100 ⁴		550
Clay loams	Note 5		Note 5		650
Light clays	Note 5		Note 5		950
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Tank Water Supply*One Bedroom Dwellings***Table A-26 Acceptable Solutions Comboyne Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	20 ⁴		10 ⁴		100
Sandy Loams	30 ⁴		20 ⁴		
Loams	40		30		150
Clay loams	60		40		
Light clays	80 ⁴		50		250
Medium/heavy clays	80 ⁴				450
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Two Bedroom Dwellings***Table A-27 Acceptable Solutions Comboyne Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		20 ⁴		200
Sandy Loams	50 ⁴		30 ⁴		
Loams	70 ⁴		50		250
Clay loams	110 ⁴		70 ⁴		300
Light clays	Note 5		90 ⁴		450
Medium/heavy clays	Note 5				900
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Three Bedroom Dwellings***Table A-28 Acceptable Solutions Comboyne Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	40 ⁴		30 ⁴		200
Sandy Loams	60 ⁴				
Loams	90 ⁴		60		300
Clay loams	130 ⁴		90 ⁴		350
Light clays	Note 5		110 ⁴		550
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

a) average slope of <10% across LAA; and

b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

a) average slope of <5% across the LAA; and

b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Four Bedroom Dwellings***Table A-29 Acceptable Solutions Comboyne Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	50 ⁴		30 ⁴		250
Sandy Loams	70 ⁴		40 ⁴		
Loams	100 ⁴		70 ⁴		350
Clay loams	Note 5		100 ⁴		450
Light clays	Note 5		130 ⁴		650
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

- a) average slope of <10% across LAA; and
- b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

- a) average slope of <5% across the LAA; and
- b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

*Five Bedroom Dwellings***Table A-30 Acceptable Solutions Comboyne Tank**

Soil Class	On-site Sewage Management System Types				
	PT/Trench ¹	PT/Bed ²	ST/Trench ¹	ST/Bed ²	SSI ³
Sands	60 ⁴		30 ⁴		300
Sandy Loams	80 ⁴		50 ⁴		
Loams	120 ⁴		80 ⁴		400
Clay loams	Note 5		120 ⁴		500
Light clays	Note 5		Note 5		750
Medium/heavy clays	Note 5				Note 5
All values are basal area of LAA in m ²					

Note 1: Trenches only considered Acceptable Solution on sites with;

- a) average slope of <10% across LAA; and
- b) 600mm depth of soil from base of trench to limiting layer or watertable.

Note 2: Beds only considered an Acceptable Solution on sites with;

- a) average slope of <5% across the LAA; and
- b) 600mm depth of soil from base of bed to limiting layer or watertable.

Note 3: Subsurface irrigation only considered an Acceptable Solution on sites with 600mm or greater depth of soil from dripline to limiting layer or watertable.

Note 4: Trenches and beds >60 m² or in sand to sandy loam soil must be pressure dosed to qualify as an acceptable solution.

Note 5: These LAA sizes are too large to be considered an Acceptable Solution.

Appendix G

Flood
Assessment
Study
Requirements



Greater Taree
CITY COUNCIL

1 FLOOD ASSESSMENT REQUIREMENTS

A flood assessment shall be undertaken where development lies within **Potentially Flood Prone Land** or where required by this Plan.

The primary objective is to determine a reasonable assessment of the extent of flood prone land and the 1% AEP flood level, to identify what development controls may apply and whether a more detailed Flood Study is required (see Schedule 7).

Flood Assessment Requirements

Unless instructed otherwise, site specific Flood Assessments shall be prepared under the following guidelines:

- The assessment shall be undertaken and certified by a professional Civil/Hydraulic Engineer with qualifications suitable for admission as a corporate Member of Engineers Australia or other suitably qualified professional. A suitably qualified professional is someone who is a member of a recognised organisation and has suitable experience, education, qualifications and indemnity insurance to undertake the work competently.
- All levels shall be relative to Australian Height Datum (AHD).
- Topographic levels shall be to an accuracy of 0.1m, structures and the like shall be to an accuracy of 0.01m.
- Rainfall intensity/frequency/durations shall be determined from Australian Rainfall and Runoff (ARR) 1987 or later.
- Flows shall be assessed using a rainfall-runoff hydrologic model and compared to peak flows using the Rational Method from ARR for urban or rural catchments as appropriate.
- The 1% AEP and the PMF flood events shall be assessed using a steady state backwater analysis technique (or better) with a sensitivity analysis on assumed or assessed parameters.
- Flood heights shall be reported in metres to two (2) decimal places, while flood velocity shall be reported in metres per second to one (1) decimal place.
- The assessed flood levels shall be compared to historic flood levels in the vicinity, if available.
- Anecdotal data and assessments based on extrapolating levels or flows from other parts of the catchment or adjacent catchment will generally not be accepted unless it can be demonstrated that such an assessment is clearly conservative and results in an upper bound design level.
- Developers shall be requested/required to make data available to Council free of cost, to form part of a local government area database.
- The Flood Assessment report shall:
- Clearly set out the objectives of the assessment, the methodology adopted and provide sufficient detail to enable easy checking of calculations and validity of assumptions used.
 - Present all historical rainfall and flood height data.
 - Present complete model results including those for sensitivity testing
 - Include maps/figures of the catchment, site, model layout and cross section locations.
 - Include tabulations and/or figures model parameters and results.

- Present the findings in sufficient detail to support the validity of the conclusions.
- Identify appropriate access routes and emergency management procedures over the full range of flood up to the PMF.
- Provide survey data including Digital Terrain Model (in a format compatible with Council's GIS) and model data files arranged in an orderly file structure.
- Clearly demonstrate the flood impacts associated with the development (if applicable).

Where development is proposed below the 1% AEP flood level or where required otherwise by this Plan, a more detailed Flood Study shall be undertaken in accordance with part 2 of this appendix - Flood Study Requirements.

2 FLOOD STUDY REQUIREMENTS

A Flood Study shall be undertaken in accordance with these requirements where called for by this Plan.

Flood Studies are generally required to identify the flood behaviour in the vicinity of the development; to identify what impacts the development would have upon flood storage or flood flow, adjacent properties and the like, and/or to assess the impact of the development and/or the cumulative impacts associated with further similar developments.

Flood Study Requirements

Unless instructed otherwise, Flood Studies shall be prepared under the guidelines of the NSW Government's Floodplain Development Manual 2005 and the following:

- The study shall be undertaken and certified by a professional Civil/Hydraulic Engineer with qualifications suitable for admission as a corporate Member of Engineers Australia or other suitably qualified professional. A suitably qualified professional is someone who is a member of a recognised organisation and has suitable experience, education, qualifications and indemnity insurance to undertake the work competently.
- All levels shall be relative to Australian Height Datum (AHD).
- Topographic levels shall be to an accuracy of 0.1m, structures and the like shall be to an accuracy of 0.01m.
- Rainfall intensity/frequency/durations shall be determined from Australian Rainfall and Runoff (ARR) 1987 or later.
- Flows shall be determined using an appropriate computer based hydrologic model and compared to peak flows derived from the Rational Method of ARR for rural and urban catchments as appropriate (contemporary models such as RAFTS<lt RORB or WBNM would be acceptable).
- Local flood behaviour shall be determined using an appropriate computer based hydraulic model (steady state backwater analysis models such as HEC-RAS area acceptable where loss of flood storage is not an issue, otherwise the unsteady version of HEC-RAS or other 1D or 2D unsteady state models such as MIKE11, ESTRY, Rubicon, RMA-2, SOBEC or TUFLOW shall be used).
- Flood heights shall be reported in metres to two (2) decimal places, while flood velocity shall be reported in metres per second to one (1) decimal place.
- Where sufficient historical information is available, the hydrological and hydraulic models shall be calibrated and verified.
- For the purposes of the study, design floods shall include 5% AEP, 2% AEP, 1% AEP and PMF flood events.
- Sensitivity analysis shall be carried out to assess how much influence the model parameter values have on the results of the calibration, verification and design events (sensitivity analysis would normally include but not limited to variations in flow, friction, infiltration and energy losses at structures).

- Where development is proposed below the 1% AEP flood level, a hydraulic quantification of the impacts of the development shall be assessed over the full range of flood events.
- Developers shall be requested/required to make data available to Council, free of cost, to form part of a Council wide database.
- The flood study report shall:
 - Clearly set out the objectives of the study, the methodology adopted and provide sufficient detail to enable easy checking of calculations and validity of assumptions used.
 - Present all historical rainfall and flood height data.
 - Present complete model results including flood heights (levels), flow distributions, velocities and flood storage variations for all calibration, validation and design events.
 - Where development is proposed below the 1% AEP flood level, present the change in hydraulic behaviour at the structure, at the property boundaries and all sites across the floodplain affected by the development.
 - Include maps/figures of the catchment, site, model layout, cross section location, flood profiles, flood extents, flood contours, flow and velocity distribution.
 - Include tabulations and/or figures depicting the spatial distribution of model parameters, flow and velocity at each section.
 - Information on preliminary hydraulic categories and preliminary hazard categories.
 - Present the findings in sufficient detail to support the validity of the conclusions.
 - Identify appropriate access routes and emergency management procedures over the full range of flood up to the PMF.
 - Provide survey data including Digital Terrain Model (compatible with Council's GIS) and model data files arranged in an orderly file structure.
 - Clearly demonstrate the flood impacts associated with the development (if applicable).

Greater Taree City Council

DRAIN MAINTENANCE GUIDELINES FOR ACID SULFATE SOILS AS DEFINED BY THE ASS RISK MAPS

Council Resolution 23 September 2005

These Drain maintenance guidelines have been prepared and endorsed by the Acid Sulfate Soils Extension Project Working Group. This group is representative of the Manning Delta Landholders Protection Committee, the Hunter/Central Rivers Catchment Management Authority and Greater Taree City Council.

The aim of these guidelines is to:

1. Improve drain maintenance practices to reduce inappropriate discharges into waterways during and after drain cleaning operations.
2. Increase awareness of options for weed control in drains other than by mechanical works.

Drain Maintenance Options

Landholders should thoroughly investigate the feasibility of implementing non-mechanical maintenance strategies for open drains in preference to mechanical weed removal. These options include:

1. Filling in the drain so that the shallow drain can be slashed or mulched
2. Spraying weeds in the drain
3. Promote tree growth along the northern edge of drains to shade out weeds
4. Modify floodgates to allow salt water exchange
5. Moving floodgates to better positions.

ALTERNATIVE METHODS FOR DRAIN AND FLOODGATE MAINTENANCE

	RECOMMENDED PROCEDURES	EXPLANATION
<i>Saltwater Flushing</i>	<p>Repair leaking floodgates only if they are causing damage to agricultural production or are in danger of structural failure.</p> <p>Assess whether floodgate redesign is required (automated tidal exchange device or sluice gate).</p>	<p>Leaking floodgates can have environmental benefits by flushing drains thus improving water quality, controlling some freshwater weeds and maintaining elevated ground water levels.</p> <p>Controlled opening allows the extent of salt water intrusion to be measured and/or controlled.</p>
<i>Spraying Drains to Control Aquatic Weeds</i>	<p>Apply herbicides only in dry periods to avoid adverse impacts from the export of herbicide and decaying plant material from the works area.</p> <p>Floodgates should be closed during and after spraying for the period specified by the chemical manufacturer to allow any surplus chemical to breakdown before entering the river.</p> <p>Ensure any spray contractors are appropriately licensed. Ensure that the proposed herbicide is fully compliant with an EPA licence for use on aquatic weeds and comply with label directions.</p> <p>Roundup bioactive is currently the only chemical permitted for use around water spraying into water.</p>	<p>Herbicide use in aquatic situations is strictly controlled because the containment of the herbicide during and after spraying can be affected by dispersion of the chemical in water and any water movement through the work area. Also decaying vegetation matter can pollute waterways.</p> <p>EPA contact: 4908 6818</p>
<i>Use of Tree Cover for Weed Control</i>	<p>Allow full tree cover on the northern, north-west or north-east side of the drain to inhibit weed growth through shading.</p> <p>Design drains to be cleaned out from the southern side of the drain.</p> <p>Monitor and manage tree growth.</p>	<p>Weeds will not grow well in shade. Maximum shade is achieved when trees are growing on the northern and north-west side of the drain. An added benefit is that tree root systems stabilise drain banks.</p> <p>This allows unobstructed access for cleaning while allowing trees on the northern side to grow without the need for removal.</p> <p>Composting leaves can add to the monosulphide black ooze and fallen limbs can block drains.</p>

In the event that mechanical drain maintenance is the only viable option, operators should use a reed bucket and adhere to the following procedures.

DRAIN AND FLOODGATE MAINTENANCE PROCEDURE

	Recommended Procedure	Explanation
1 <i>Notification</i>	The landholder and operator need to ensure any proposed works comply with all relevant legislation. Lack of knowledge is not an option for appeal if a breach occurs.	<p>A Controlled Activity Approval will be required from NSW DPI Office of Water if works are to be carried out within 40m of a natural waterway. Contact: DPI 1800 353 104.</p> <p>A permit may be required for damage or removal of mangroves, and for dredging or reclamation works near waterways. Contact: DPI (NSW Fisheries) 4916 3931.</p> <p>Approval under the NSW Native Vegetation Act may be required for the removal of any native vegetation that was growing prior to 1990. Contact: Hunter Local Land Services 6551 8994.</p>
2 <i>Timing of works</i>	<p>Drain cleaning works should be scheduled for drier climatic conditions to minimise the potential for any runoff (late winter - early summer).</p> <p>If sufficient rain occurs during work so as to increase the potential of uncontrolled discharge, work should stop immediately and any potential discharge minimised and any actual discharge monitored and treated as required. Works are not to recommence until runoff ceases.</p>	<p>There is a high risk of severe environmental impacts on receiving waters when water flows over drain spoils or through recently worked drains and discharges into waterways.</p> <p>Work should not be carried out, where possible, if the drain is running.</p>
3 <i>Machinery Access</i>	Before entering other private property or Crown Land with excavating equipment, at least verbal notification should be provided to private property owners and written notification to managers of Crown land.	It is important to ensure that all affected landholders are aware of the proposed works to be undertaken on or adjacent to their property.
4 <i>Excavator Operators</i>	<p>If a contractor is doing the work, preference should be given to contractors who have attended relevant training.</p> <p>The contractor should be provided with a Works Procedure Plan by the landholder.</p> <p>The contractor should work in such a way as to minimise sediment disturbance when removing aquatic weeds.</p>	<p>Contractors must have received accreditation and approved training in recognising and handling ASS material to ensure work is properly carried out.</p> <p>Written instructions are an important means of risk management as well as assisting the operator in understanding his task.</p> <p>Many aquatic plants have rooted systems within the drain sediments that make it impossible to avoid sediment disturbance when removing drain weeds. However all care should be taken to minimise sediment disturbance or removal.</p>
5 <i>Pre-works management</i>	<p>Lime must be immediately available for delivery, prior to any works.</p> <p>Ensure floodgates are shut or install a temporary weir or silt curtain in drains to contain water/sediment prior to work commencing. Do not lift floodgate, remove temporary weir or silt curtain for two weeks after works are completed to</p>	<p>The landholder needs to ensure they can access lime when and if necessary during the planned works.</p> <p>Sediment curtains can be obtained from most hardware shops. This will assist in containing any disturbed sediment and preventing discharge of turbid water to waterways.</p>

	Recommended Procedure	Explanation
	<p>allow sediment to settle and water pH to return to normal. Lime may be added to assist pH to return to acceptable levels.</p> <p>All works should commence in the upper reaches of the drain and progressively work towards the outlet.</p> <p>Mature riparian vegetation should not be disturbed and/or removed unless absolutely necessary to facilitate access for the excavating machinery.</p>	<p>Existing vegetation can help 'filter' sediment laden water and allows time for sediment to settle out prior to reaching the outlet.</p> <p>Riparian vegetation helps shade drains to minimise weed growth and should be encouraged to reduce maintenance frequency and costs.</p>
6 <i>Determination of Liming Rate</i>	<p>Drain sediment and spoil should be tested to confirm the presence of ASS and determine an appropriate liming rate.</p> <p>An alternative to testing drain sediment in smaller scale projects involving maintenance activities less than 500 metres is to apply a conservative generic liming rate of 75kg/m³.</p> <p>For any drain maintenance activities greater than 500 metres it would be advisable to sample and laboratory test to reduce liming costs and avoid over liming.</p>	<p>More appropriate management strategies can be developed with detailed laboratory information on soil/drain sediment properties.</p> <p>This conservative generic rate has been set to allow landholders to minimise testing costs while also minimising adverse environmental risk from disturbance.</p> <p>Amount of lime required can be calculated by: Length of drain x Width of drain x Depth of disturbance x Liming rate/m³ spoil (75kg/m³) e.g. 400m x 2m x 0.2m x 75 = 12,000 kg lime</p> <p>It may be more economical to carry out tests for drain cleaning work over 500m in length rather than applying generic liming rate.</p>
7 <i>Sediment and spoil management</i>	<p>Lime should be added to the drain prior to excavation of weeds to facilitate mixing within the drain.</p> <p>A layer of lime (¼-½ of lime) should be spread on the ground where the spoil is to be placed.</p> <p>Any sediment, spoil or vegetation material excavated must be positioned to avoid runoff and/or leachate entering into watercourses.</p> <p>Excavated spoil is then spread in a thin layer over the lime, with the rest of the lime spread over the spoil.</p> <p>Mix the top lime into spoil as soon as the material is dry enough to be cultivated.</p>	<p>Lime will assist in the neutralisation process.</p> <p>Spreading spoil in a thin layer will assist the mixing of lime by cultivation.</p>
8 <i>Mangrove Removal</i>	<p>A permit [Part 7 Harm Marine Vegetation Permit] is required from NSW DPI Fisheries to cut, damage or destroy marine vegetation and this applies for any mangrove removal in front (outside) of floodgates.</p> <p>Under permit, to maintain the function of the drain and floodgates, limit mangrove removal in front of floodgate to the base of the drain and remove young mangroves</p>	<p>Mangroves are protected under the NSW Fisheries Management Act because of their importance as fish habitat. The permit process minimises the removal of important habitat for aquatic species and ensures that any works minimise disturbance to the site.</p> <p>Removal of young plants (only with approval from NSW Fisheries) by hand outside the floodgate minimises disturbance of drain sediment and reduces long-term maintenance</p>

	Recommended Procedure	Explanation
	<p>by hand.</p> <p>NSW Fisheries have advised that no permit is required to remove problematic mangroves from the base of drains <u>behind</u> operational floodgates.</p> <p>Where possible, leave mature mangroves. If mangroves must be removed, replace with other tree species planted on the levee to shade the water, improve fish habitat and prevent the germination and growth of reeds.</p>	<p>costs for landholders.</p> <p>Mangrove removal <u>behind</u> floodgates without permits should only be undertaken along the centre of the drain and by hand tools only.</p> <p>Drain bank stabilisation is critical for both the landholder and the environment.</p>
9 <i>Deepening or Widening Drains</i>	The original profile of the drain must not be enlarged.	Any widening or deepening of drains will require development consent from Council.

Clearing of drains can enhance their flood mitigation capacity but can also increase their capacity to drain the soil water table. If drain clearing lowers the water level in the drain, pen stocks or a weir should be fitted to the drain to maintain water table levels.

Any new drain construction work will require development consent from Council.

If you wish to seek any further information on these guidelines contact Greater Taree City Council on 6592 5399.

Appendix J: Site Waste Minimisation and Management Plan (SWMMP) Template

Applicant to complete these tables and submit with the SWMMP.

Applicant and Project Details	
Applicant Details	
Application No.	
Name	
Address	
Phone number(s)	
Email	
Project Details	
Address of development	
Existing buildings and other structures currently on site	
Description of proposed development	

Waste Minimisation and Management Declaration	
<i>This development achieves the waste objectives set out in Council's 2010 DCP. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as Council, EPA or WorkCover NSW.</i>	
Name	
Signature	
Date	

SWMMP FOR DEMOLITION OF BUILDINGS OR STRUCTURES

Complete where demolition of buildings or structures will occur.

Demolition				
		RE-USE AND RECYCLING		DISPOSAL
Type of waste	Estimated Volume (m ³) or Weight (t)	On Site: Specify proposed on-site reuse or recycling methods <i>Refer to Figure 1 for examples of how waste can be reused or recycled on site.</i>	Off Site: Specify contractor and recycling outlet <i>Example – Sent by XYZ Demolishers to ABC Recycling Co.</i>	Specify contractors and landfill site <i>Example – Sent by XYZ Demolishers to ABC Landfill Site.</i>
Garden waste				
Bricks				
Concrete				
Timber (please specify)				
Tiles				
Glass				
Plasterboard				
Metals (please specify)				
Floor coverings				
Hazardous/special waste (such as asbestos – please specify)				
Other (please specify)				

Note: All demolition, excavation and construction waste dockets are to be retained on site to confirm which facility received materials generated from the site for recycling or disposal.

Checklist: Compliance with Performance Criteria

Please complete this checklist.

	Check if 'yes'
An area has been allocated on site for the storage of materials for re-use, recycling and disposal (taking into consideration slope, drainage, location of waterways, stormwater outlets, vegetation, and access and handling requirements).	<input type="checkbox"/>
Separated and clearly signed bins/areas shall be provided on site.	<input type="checkbox"/>
Measurements shall be implemented to prevent damage by the elements, odour, health risks and windborne litter.	<input type="checkbox"/>

SWMMP FOR CONSTRUCTION

Please complete for single dwellings, semi-detached and dual occupancy greater than \$50,000, multi-unit dwellings, commercial developments and change of use, mixed use developments and industrial developments.

Construction				
		RE-USE AND RECYCLING		DISPOSAL
Type of waste	Estimated Volume (m ³) or Weight (t)	On Site: Specify proposed on-site reuse or recycling methods <i>Refer to Figure 1 for examples of how waste can be reused or recycled on site.</i>	Off Site: Specify contractor and recycling outlet <i>Example – Sent by XYZ Demolishers to ABC Recycling Co.</i>	Specify contractors and landfill site <i>Example – Sent by XYZ Demolishers to ABC Landfill Site.</i>
Bricks				
Concrete				
Timber (please specify)				
Tiles				
Plasterboard				
Metals (please specify)				

Floor coverings				
Packaging				
Other (please specify)				

Note: All demolition and construction waste dockets are to be retained on site to confirm which facility received materials generated from the site for recycling or disposal.

Plans and drawings

Please complete the applicable checklist.

Table 1: Single dwellings, semi-detached and dual occupancy greater than \$50,000.

	Check if 'yes'
Submitted plans detail...	
The location of appropriate on site waste/recycling storage areas.	<input type="checkbox"/>
The kerbside collection point for collection and emptying of Council waste, recycling and green waste bins.	<input type="checkbox"/>
The accessibility between waste/recycling storage area and collection point.	<input type="checkbox"/>
Sufficient space in kitchen (or alternate location) for interim storage of waste and recyclables.	<input type="checkbox"/>

Table 2: Multi-unit dwellings.

	Check if 'yes'
Submitted plans detail...	
The location of appropriate on site waste/recycling storage areas.	<input type="checkbox"/>
The location of any garbage chute(s) and interim storage for recyclables.	<input type="checkbox"/>
The location of any service rooms (for accessing garbage chute).	<input type="checkbox"/>
The location of any waste compaction equipment.	<input type="checkbox"/>
The collection point for collection and emptying of Council waste, recycling and green waste bins.	<input type="checkbox"/>
Path of travel for moving bins from storage area to collection point (if collection occurring away from storage area).	<input type="checkbox"/>
The on site path of travel for collection vehicles (if applicable), taking accessibility requirements into account.	<input type="checkbox"/>
Project management incorporates...	
Maximising source separation and recyclables recovery.	<input type="checkbox"/>
Minimising the potential risks of collecting, storing and disposing of waste.	<input type="checkbox"/>
Where applicable, the following are provided as a minimum...	
Residential flat buildings include a communal waste/recycling storage room (or rooms).	<input type="checkbox"/>
Dwellings in the form of townhouses and villas include either an individual waste/recycling storage room (or rooms) or a communal facility.	<input type="checkbox"/>
Waste/recycling storage room (or rooms) are of appropriate size to accommodate Council waste, recycling and green waste bins.	<input type="checkbox"/>
For multi-storey developments including ten or more dwellings, a readily-accessible room or caged area is provided for temporary storage of discarded bulky items.	<input type="checkbox"/>
Waste/recycling storage room (or rooms) location and design consider...	
Minimising adverse impact upon neighbouring properties and appearance of premises.	<input type="checkbox"/>
Unobstructed and continuous accessible path of travel from waste/storage room (or rooms) to the entry of any Adaptable Housing, the principle entrance to each residential flat building, and the waste and recyclables collection point.	<input type="checkbox"/>
Adequate space required for the storing and manoeuvring of required number of Council bins.	<input type="checkbox"/>
Suitable accessibility, ventilation and lighting.	<input type="checkbox"/>

If bins cannot be collected from kerbside or immediately inside property boundary, on site access by garbage collection vehicle is appropriately accommodated for (including space and strength/design of internal roads).	<input type="checkbox"/>
Cold water supply for cleaning of bins and storage room (or rooms).	<input type="checkbox"/>
Weather proofing, ease of cleaning and wastewater discharge to sewer.	<input type="checkbox"/>
Complimenting the design of the development and surrounds.	<input type="checkbox"/>
If development contains four or more storeys, a suitable system is provided for transportation of waste from each storey to waste/recycling storage and collection areas.	<input type="checkbox"/>
Alternative interim disposal facilities for recyclables since garbage chutes are not suitable for recyclables.	<input type="checkbox"/>

Table 3: Commercial developments and change of use

	Check if 'yes'
Submitted plans detail...	
Location of appropriately-sized waste/recycling storage room (or rooms).	<input type="checkbox"/>
Location of temporary waste/recycling storage areas within each tenancy (of a sufficient size to store one day worth of waste).	<input type="checkbox"/>
Collection point for the Council waste, recycling and green waste bins.	<input type="checkbox"/>
Path of travel between storage area and collection point.	<input type="checkbox"/>
On site path of travel for collection vehicles (if applicable).	<input type="checkbox"/>
Convenient access from each tenancy to waste/recycling storage area and convenient step-free access between waste/recycling storage area and collection point.	<input type="checkbox"/>
Where applicable, development design considers...	
Depending on size and type of development, separate waste/recycling for each tenancy may be necessary.	<input type="checkbox"/>
Arrangements for the separation of recyclables from general waste and for the movement of these to waste/recyclable storage area.	<input type="checkbox"/>
The waste/recycling storage room (or rooms) is of sufficient size to accommodate required number of bins.	<input type="checkbox"/>
Clearly signed containers are provided in the waste/recycling storage area for the separation of recyclable materials from general waste.	<input type="checkbox"/>
Enclosure, covering and maintenance of waste/recycling storage area to prevent polluted wastewater runoff.	<input type="checkbox"/>
The size and layout of the waste/recycling storage room (or rooms) must be capable of accommodating reasonable future changes in the use of the development.	<input type="checkbox"/>
Each kitchen in the development includes a waste/recycling cupboard to separate recyclables from general waste and to hold a minimum of a single day's waste.	<input type="checkbox"/>
Any garbage chutes are designed in accordance with the <i>Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings</i> and are labelled as inappropriate for recyclables.	<input type="checkbox"/>

Table 4: Mixed use developments

	Check if 'yes'
Table 2 is completed for residential component of development.	<input type="checkbox"/>
Table 3 is completed for non-residential component of development.	<input type="checkbox"/>
Mixed Use development incorporates separate waste/recycling storage areas for residential and non-residential components.	<input type="checkbox"/>
Residential waste management system and non-residential waste management system are designed so that they can efficiency operate without conflict.	<input type="checkbox"/>

Table 5: Industrial developments

	Check if 'yes'
Submitted plans detail...	
Location of waste/recycling storage room(s) or areas to meet needs of all tenants.	<input type="checkbox"/>
On-site path of travel for collection vehicles.	<input type="checkbox"/>
Convenient access from each tenancy to waste/recycling storage area and convenient step-free access between waste/recycling storage area and collection point.	<input type="checkbox"/>
Designated storage areas for industrial waste streams (designed in accordance with specific waste laws/protocols).	<input type="checkbox"/>
Waste/recycling storage room(s) of sufficient size to accommodate quantity of waste generated between collections.	<input type="checkbox"/>
Development design considers...	
Enclosure, covering and maintenance of waste/recycling storage area to prevent polluted wastewater runoff.	<input type="checkbox"/>
Each kitchen in the development includes a waste/recycling cupboard to separate recyclables from general waste and to hold a minimum of a single day's waste.	<input type="checkbox"/>

Figure 1: Examples of materials and potential reuse/recycling opportunities
(adapted from *Combined Sydney Regional Organisation of Councils Model DCP 1997*)

Material	Reuse/recycling potential
Concrete	Reused for road base.
Bricks and pavers	Can be cleaned for reuse or rendered over or crushed for use in landscaping and driveways.
Roof tiles	Can be cleaned and reused or crushed for use in landscaping and driveways.
Untreated timber	Reused as floorboards, fencing, furniture, mulched or sent to second hand timber suppliers.
Treated timber	Reused as formwork, bridging, blocking and propping, or sent to second hand timber suppliers.
Doors, windows, fittings	Sent to second hand suppliers.
Glass	Reused as glazing or aggregate for concrete production.
Metals (fittings, appliances and wiring)	Removal for recycling.
Synthetic rubber (carpet underlay)	Reprocessed for use in safety devices and speed humps.
Significant trees	Relocated either onsite or offsite.
Overburden	Power screened and used as top soil.
Garden waste	Mulch, composted.
Carpet	Can be sent to recyclers or reused in landscaping.
Plasterboard	Removal for recycling, return to supplier.